Order Number: MGCS080901C0
H13

Service Manual

Facsimile

UF-8300 / 8200
UF-7300 / 7200

[Version 1.0]

⚠ WARNING

This service information is designed for experienced repair technicians only and is not intended for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt within this service information by anyone else could result in serious injury or death.

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

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General Annotations

1. Panasonic Communications Company of North America, and other Panasonic Sales Companies reserve the right to change any information enclosed herein without prior notification. (This includes, but is not limited to, parts pricing, availability, and text)

2. Electrical parts supplied may include previously used components.

3. ⚠ **Important Safety Notice**
   Components identified by a ⚠ mark, have special characteristics important for safety. When replacing any of these components, use only manufacturer’s specified parts.

4. In New Parts column, "**N**" indicates part is used only in **UF-8300/8200** Series, "**C**" indicates part is used in previous models.

5. In Remarks column, "**PM**" indicates "Preventive Maintenance Part".

6. In Remarks column, "**RTL**" indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention.
   After the end of this period, the assembly will no longer be available.

7. This "Unit" which includes other itemized parts is provided as "Limited Availability" for your convenience, and will only be offered for up to 3 years after the production of the unit ceases. However, the individual contents of the assembly will be available for the standard period.

8. **This Product Uses Lead (Pb) Free Solder Printed Circuit Boards (PCBs).**
   Information regarding Lead-Free (PbF) solder;

   Distinction of PbF PCB:
   PCBs (manufactured) using lead free solder will have a PbF mark following the PCB part numbers in a label on the PCB.

   Caution:
   - Pb free solder has a higher melting point than standard solder; typically the melting point is 50 - 70 °F (30 - 40 ℃) higher. Please use a soldering iron with temperature control and adjust it to 700 ± 20 °F (370 ± 10 ℃). Exercise care while using higher temperature soldering irons, do not heat the PCB for too long to prevent solder splash or damage to the PCB.
   - Pb free solder will tend to splash when heated too high (about 1112 °F/600 ℃).
   - ECO SOLDER M705 (available from Senju Metal Industry Co., Ltd.; URL: http://www.senju-m.co.jp) is recommended when repairing PbF PCBs.

General Annotations

9. Important Notice
(Especially for countries belonging to the European Union):

This product is fully compliant with the national laws transposed from the EU Directive on the restriction of the use of certain hazardous substances (RoHS) in electrical and electronic equipment, effective July 1, 2006 in the EU countries.

In order for the product to comply with the RoHS Directive, the six particular substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, and polybrominated diphenyl ethers) have been either totally eliminated or limited to the concentration level below maximum allowed. Consequently spare parts have been changed to RoHS-compliant parts where applicable.

Due to spare parts application of RoHS legislation, non-compliant spare parts cannot be used to repair compliant products put on the EU market on or after July 1, 2006. Therefore, please make sure to order and use only RoHS-compliant spare parts listed in this manual.

The contents of this Manual, and the Specifications are subject to change without notice.
Panasonic Communications Co., Ltd. reserves the right to make improvements in the product design without reservation, and without notice.
Published in Japan.

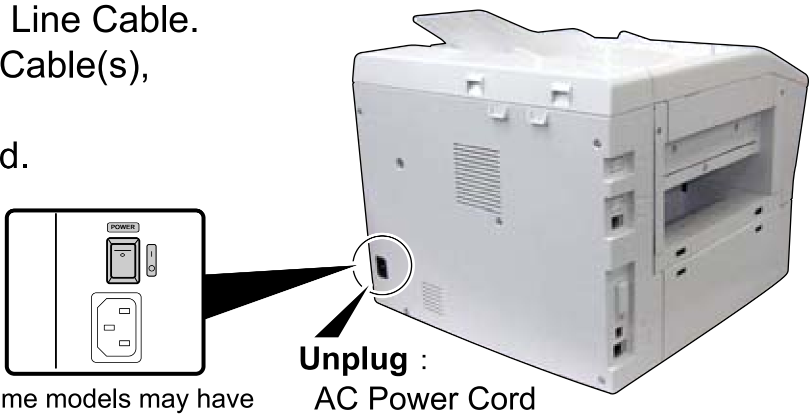
Important Notice

Please read these Instructions completely **BEFORE** installing any optional accessories. Installing the additional board, or connector with the power ON could damage the SC, and/or other board(s).

How to turn OFF the Power:

1. Disconnect the Telephone Line Cable.
2. Disconnect the LAN/USB Cable(s), if connected.
3. Unplug the AC Power Cord.

<Reference>



(Some models may have the Power Switch.)

Unplug : AC Power Cord

(There is a remote possibility of electrocution when servicing the unit during a Lightning Storm. As a precaution, disconnect the Telephone Line Cable first, before unplugging the AC Power Cord.)

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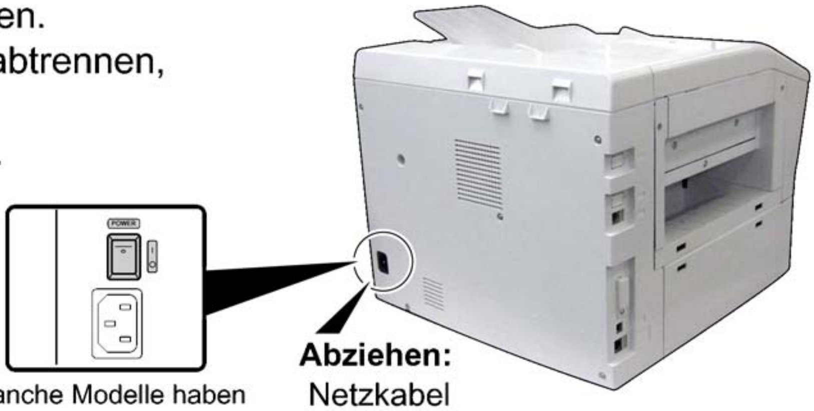
Wichtiger Hinweis

Diese Anweisungen bitte ganz durchlesen, BEVOR optionales Zubehör installiert wird. Ansonsten können bei Einbau der zusätzlichen Leiterplatte oder Anschließen des Steckverbinders bei zugeschalteter Netzspannung die SC- und/oder andere Leiterplatten beschädigt werden.

AUSSCHALTEN der Netzspannung:

1. Das Telefonkabel abtrennen.
2. Das/die LAN/USB-Kabel abtrennen, falls angeschlossen.
3. Das Netzkabel abtrennen.

<Zur Bezugnahme>



(Manche Modelle haben einen Netzschalter.)

Abziehen:
Netzkabel

(Es ist zwar unwahrscheinlich, aber theoretisch möglich, dass bei Arbeiten am Gerät während eines Gewitters ein tödlicher elektrischer Schlag durch Blitzeinschlag auftritt Als Vorsichtsmaßnahme immer zuerst das Telefonkabel abtrennen, bevor das Netzkabel abgezogen wird.)

* Technische Änderungen jederzeit vorbehalten. Panasonic Communications Co., Ltd. behält sich das Recht vor, jederzeit und ohne Mitteilung Verbesserungen des Produkt-Designs durchzuführen.

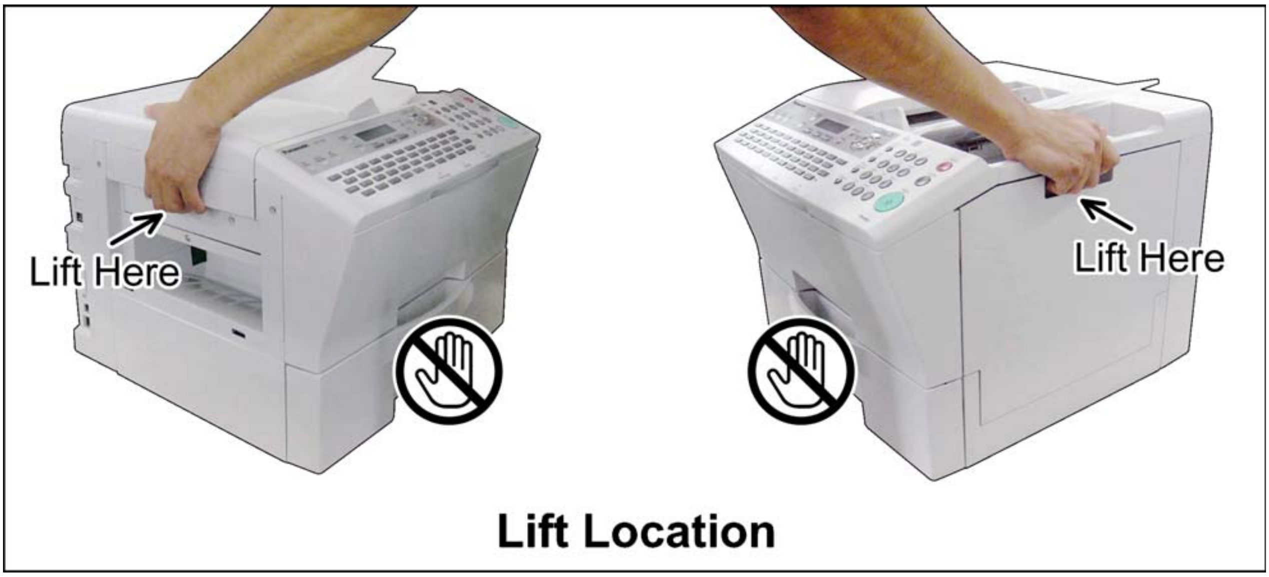
Important Notice for Installation

Caution:

Depending on your machine's model, it may weight approximately 47.40 lb (21.5 kg) without any options.

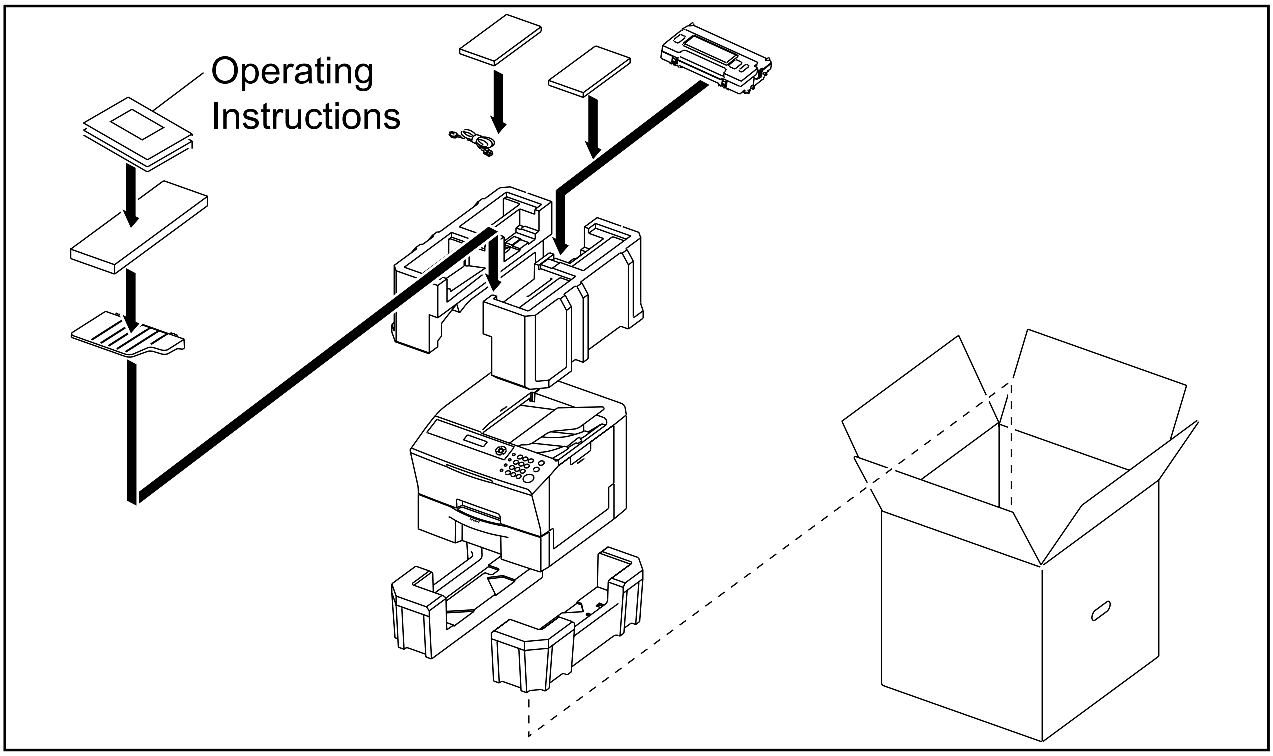
To prevent injuries, use the appropriate number of personnel and **lift or move the machine as illustrated**.

Do not lift the machine by the Paper Tray as it may cause damage and/or bodily injury.


Lift Here
Lift Here
Lift Location

Note:

Refer to the Operating Instructions when installing the machine.


Operating
Instructions

Precautions

For Your Safety

To prevent severe injury and loss of life, read this section carefully before servicing the Panasonic machine to ensure proper and safe operation of your machine.
Please ensure that the machine is installed near a wall outlet and is easily accessible.

- This section explains the Warnings and Cautions used in the machine and/or this manual.

⚠ **WARNING:** Denotes a potential hazard that could result in serious injury or death.

⚠ **CAUTION:** Denotes hazards that could result in minor injury or damage to the machine.

- This section also explains the Warnings and Cautions used in the machine and/or this manual.

⊘ ⊘ ⊘	These symbols are used to alert operators to a specific operating procedure that must not be performed.
❗ ⊖	These symbols are used to alert operators to a specific operating procedure that must be emphasized in order to operate the machine safely.

⚠ WARNING

Power and Ground Connection Cautions

Ensure that the plug connection is free of dust. In a damp environment, a contaminated connector can draw a significant amount of current that can generate heat and eventually cause fire if left unattended over an extended period of time.

Always use the power cord provided with your machine. When an extension power cord is required, always use a properly rated cord.
- 120 V/15 A or AC 220 - 240V/10 A

If you use a cord with an unspecified current rating, it may be underrated, and the machine, or plug may emit smoke, orbecome hot to the touch.

Do not attempt to repair, pull, bend, chafe or otherwise damage the power cord. Do not place a heavy object on the cord. A damaged cord can cause fire or electric shocks.

Never touch a power cord with wet hands. Danger of electric shock exists.

If the power cord is damaged, or insulated wires are exposed, contact the authorized Panasonic dealer for a replacement. Using a damaged cord can cause fire or electric shocks.

Stop operation immediately if your machine emits smoke, excessive heat, unusual noise, or abnormal smell, or if water is spilt onto the machine. These conditions can cause fire. Immediately switch Off and unplug the machine, and contact the authorized Panasonic dealer.

Do not disconnect or reconnect the machine while the power switch is in the On position. Disconnecting a live connector can cause arcing, consequently deforming the plug and cause fire.

When disconnecting the machine, grasp the plug instead of the cord. Pulling on a cord forcibly can damage it, and cause fire, or an electric shock.

When the machine is not used over an extended period of time, switch it Off and unplug it. If an unused machine is left connected to a power source for a long period, degraded insulation can cause electric shocks, current leakage or fire.

Be sure to switch Off, and unplug the machine before accessing the interior of the machine for cleaning, maintenance or fault clearance. Access to a live machine's interior can cause an electric shock.

Once a month, unplug the machine and check the power cord for the following. If you notice any unusual condition, contact your authorized Panasonic dealer
- The power cord is plugged firmly into the receptacle.
- The plug is not excessively heated, rusted, or bent.
- The plug and receptacle are free of dust.
- The cord is not cracked or frayed.

Operating Safeguards

Do not touch areas where these caution labels are attached to, the surface may be very hot and may cause severe burns.

Do not place any liquid container such as a vase, or coffee cup on the machine. Spilt water can cause fire or shock hazard.

Do not place any metal parts such as staples or clips on the machine. If metal and flammable parts get into the machine, they can short-circuit internal components, and cause fire or electric shocks.

If debris (metal or liquid) gets into the machine, switch Off and unplug the machine immediately.
Operating a debris-contaminated machine can cause fire or electric shock.

Do not try to alter the machine configuration or modify any parts. An unauthorized modification can cause smoke or fire.

Consumable Safeguards

Never dispose of toner, toner cartridge, or a waste toner container into an open flame. Toner remaining in the cartridge/bottle can cause an explosion, burns and/or injuries.

⚠ CAUTION

Installation and Relocation Cautions

Do not place the machine near heaters or volatile, flammable, or combustible materials such as curtains that may catch fire.

Do not place the machine in a hot, humid, dusty, or poorly ventilated environment. Prolonged exposure to these adverse conditions can cause fire or electric shocks.

Place the machine on a level and sturdy surface that can withstand the weight of the machine.
Refer to the Specifications section for the weight of the machine.
If tilted, the machine may tip-over and cause injuries.

When relocating the machine, remove the toner and/or developer, and pack the machine with proper packing materials for shipping.

When moving the machine, be sure to unplug the power cord from the outlet. If the machine is moved with the power cord attached, it can cause damage to the cord which could result in fire or electric shock.

⚠ CAUTION

Operating Safeguards

Do not place a magnet near the safety switch of the machine. A magnet can activate the machine accidentally, resulting in injuries.

Do not use a highly flammable spray, or solvent near the machine. It can cause fire.

When copying a thick document, do not use excessive force to press it against the scanning glass. The glass may break and cause injuries.

Never touch a labelled area found on, or near the heat roller You can get burnt. If a sheet of paper is wrapped around the heat roller, do not try to remove it yourself to avoid injuries or burns. Switch Off the machine immediately, and wait until it cools down.

Do not use conductive paper, e.g. folding paper, carbon paper and coated paper. When a paper jam occurs, they can cause a short circuit and fire.

Do not place any heavy object on the machine. An off-balance machine can tip-over, or the heavy object can fall, causing damage and/or injuries.

Keep the room ventilated when using the machine for an extended period of time to minimize the ozone density in the air.

When copying with the document cover open, do not look directly at the exposure lamp. Direct eye exposure can cause eye fatigue or eye injury.

Pull the paper trays out slowly to prevent injuries.

When removing jammed paper, make sure that no pieces of torn paper are left in the machine. A piece of paper remaining in the machine can cause fire. If a sheet of paper is wrapped around the heat roller, or when clearing a jammed paper that is difficult or impossible to see, do not try to remove it by yourself. Doing so can cause injuries or burns. Switch Off the machine immediately, and wait until it cools down.

Consumable Safeguards

Never heat the drum cartridge, or scratch its surface. A heated, or scratched drum can be hazardous to your health.

Do not mix new and old batteries together, as they can burst or leak, causing a fire or injuries. Be sure to use the specified type of batteries only.

Others

- ■ When clearing a paper jam or other fault, follow the appropriate procedure given in this manual.
- ■ The machine has a built-in circuit for protection against lightning-induced surge current. If lightning strikes in your neighborhood, maintain an ample distance from the machine, and do not touch it until the lightning stops.
- ■ If you notice flickering, distorted images, or noises on your audio-visual units, your machine may be causing radio interference. Switch it Off, and if the interference disappears, the machine is the cause of the radio interference. Perform the following procedure until the interference is corrected.
  - Move the machine, and theTV and/or radio away from each other.
  - Reposition or reorient the machine, and theTV and/or radio.
  - Unplug the machine, TV and/or radio, and replug them into outlets operating on different circuits.
  - Reorient the TV and/or radio antennas, and cables until the interference stops. For an outdoor antenna, ask your local electrician for support.
  - Use a coaxial cable antenna.

Für Ihre Sicherheit

Um schwere Verletzungen, möglicherweise mit Todesfolge, zu vermeiden, lesen Sie diesen Abschnitt sorgfältig durch, bevor Sie den Panasonic verwenden, um richtige und sichere Verwendung Ihrer Maschine sicherzustellen.

■ Dieser Abschnitt erklärt die Warnungen und Vorsichtsmaßregeln, die in dieser Bedienungsanleitung verwendet werden.

⚠ **WARNUNG**	Weist auf eine potenzielle Gefahr hin, die zu schweren Verletzungen oder Tod führen kann.
⚠ **Achtung**	beschreibt Gefahren, die zu leichten Verletzungen oder Schäden an der Maschine führen können.

■ Dieser Abschnitt erklärt auch die grafischen Symbole, die in dieser Bedienungsanleitung verwendet werden.

🛇 🛇 🛇	Diese Symbole werden verwendet, um Bediener auf spezifische Bedienverfahren hinzuweisen, die vermieden werden müssen.
❗ 🔌	Diese Symbole werden verwendet, um Bediener auf spezifische Bedienverfahren hinzuweisen, die genutzt werden müssen, um die Maschine sicher zu betreiben.
⚠	Dieses Symbol dient dazu, die Bediener darauf aufmerksam zu machen, dass eine heiße Oberfläche vorhanden ist, die Verbrennungen verursachen kann.

⚠WARNUNG

Vorsichtsmaßregeln zu Strom- und Erdungsverbindungen

❗ Stellen Sie sicher, dass die Steckerverbindung staubfrei ist. In einer feuchten Umgebung kann ein verschmutzter Secker eine beträchtliche Menge Strom aufnehmen, die Hitze erzeugen und nach längerer Zeit in diesem Zustand zu Bränden führen kann.

❗ Verwenden Sie immer das mit dem Gerät mitgelieferte Netzkabel. Wenn ein Verlängerungskabel erforderlich ist, verwenden Sie immer ein Kabel mit geeigneter Stärke.
● AC 220-240V/10A
Wenn Sie ein Kabel mit einer nichtspezifizierten Stromstärke verwenden, kann die Maschine Rauch abgeheben oder sich außen stark erhitzen.

🛇 Versuchen Sie nicht, das Netzkabel zu modifizieren und vermeiden Sie Ziehen, Biegen, Scheuern oder anderweitige Beschädigung. Stellen Sie keine schweren Gegenstände auf das Netzkabel. Ein beschädigtes Netzkabel kann zu Bränden oder elektrischen Schlägen führen.

🛇 Niemals ein Netzkabel mit nassen Händen berühren. Dabei besteht die Gefahr elektrischer Schläge.

❗ Wenn das Netzkabel beschädigt ist oder isolierte Drähte freiliegen, wenden Sie sich wegen Ersatz an Ihren Panasonic-Fachhändler. Verwendung eines beschädigten Netzkabels kann zu Bränden oder elektrischen Schlägen führen.

🔌 Sofort den Betrieb stoppen, wenn Ihre Maschine Rauch, starke Hitze, ungewöhnliche Geräusche oder Geruch abgibt, oder wenn Wasser auf die Maschine geschüttet wurde. Durch diese Bedingungen können Brände verursacht werden. Schalten Sie die Maschine sofort aus, ziehen Sie den Stecker ab, und wenden Sie sich an Ihren Panasonic-Fachhändler.

🛇 Versuchen Sie nicht, die Maschine abzutrennen oder neu anzuschließen, während der Netzschalter auf Ein steht. Durch Abziehen eines stromführenden Steckers kann ein Lichtbogen entstehen, durch den Verformungen und Brände verursacht werden.

❗ Beim Abtrennen des Netzsteckers immer am Stecker und nicht am Kabel ziehen. Wenn ein Stecker gewaltsam abgezogen wird, kann er beschädigt werden und Brände oder elektrische Schläge verursachen.

❗ Wenn die Maschine längere Zeit über nicht verwendet wird, schalten Sie sie aus und ziehen den Netzstecker ab. Wenn eine nichtverwendete Maschine längere Zeit an einer Stromquelle angeschlossen bleibt, kann beeinträchtigte Isolierung zu elektrischen Schlägen, Stromlecks oder Feuer führen.

❗ Schalten Sie die Maschine immer aus und ziehen Sie den Stecker ab, bevor Sie auf das Innere der Maschine zugreifen, um Reinigung, Wartung oder Fehlerbehebung auszuführen. Zugriff zu Teilen im Maschineninneren kann zu elektrischen Schlägen führen.

Einmal im Monat die Maschine vom Netz trennen und das Netzkabel auf Folgendes prüfen. Wenn ein ungewöhnlicher Zustand vorgefunden wird, wenden Sie sich an Ihren Panasonic-Fachhändler.

- Das Netzkabel ist fest in die Steckdose eingesteckt.
- Der Stecker ist nicht stark erhitzt, verrostet oder verbogen.
- Stecker und Steckdose sind frei von Staub.
- Das Kabel ist nicht gerissen oder aufgefasert.

Bedienungs-Schutzmaßnahmen

Berühren Sie nicht Bereiche, wo diese Vorsichtsaufkleber an der Oberfläche angebracht sind, da diese sehr heiß sein können und zu schweren Verbrennungen führen können.

Stellen Sie keine Flüssigkeitsbehälter wie eine Vase oder Kaffeekanne auf die Maschine. Verschüttetes Wasser kann zu Bränden oder elektrischen Schlägen führen.

Legen Sie keine Metallgegenstände wie Heft- oder Büroklammern auf die Maschine. Falls Metall- oder brennbare Teile in die Maschine geraten, können sie zu Kurzschlüssen an internen Bauteilen führen und Brände oder elektrische Schläge verursachen.

Falls Fremdkörper (Metall oder Flüssigkeiten) in die Maschine geraten, sofort ausschalten und den Stecker abziehen. Den Panasonic-Fachhändler anrufen. Bedienung einer durch Fremdkörper verschmutzten Maschine kann zu Bränden oder elektrischen Schlägen führen.

Niemals die Maschinenabdeckungen öffnen, die mit Schrauben festgeschraubt sind, wenn nicht spezifisch in der “Bedienungsanleitung” angegeben. Ein Hochspannungsbauteil kann zu elektrischen Schlägen führen.

Versuchen Sie nicht, die Maschinenkonfiguration zu ändern oder Teile zu modifizieren. Eine unbefugte Modifikation kann zu Rauch oder Bränden führen.

VerbrauchsmaterialienSchutzmaßnahmen

Niemals Toner, Tonerkassette oder Tonerabfallbehälter in offenes Feuer werfen. In der Kassette verbleibender Toner kann eine Explosion verursachen und zu Verbrennungen und/oder Verletzungen führen.

⚠ ACHTUNG

Vorsichtsmaßregeln zu Aufstellung und Transport

Platzieren Sie die Maschine nicht in der Nähe von Heizkörpern oder flüchtigen, entflammbaren oder brenbaren Materialien wie Vorhänge, die Feuer fangen können.

Stellen Sie die Maschine nicht in einer heißen, feuchten, staubigen oder schlecht belüfteten Umgebung auf. Längerer Betrieb unter diesen Bedingungen kann zu Bränden oder elektrischen Schlägen führen.

Die Maschine auf eine ebene und feste Oberfläche stellen

Wenn sie geneigt wird, kann die Maschine umkippen und Verletzungen verursachen.

Beim Aufstellungsänderung des Geräts wenden Sie sich an Ihren Panasonic-Fachhändler.

Beim Transport der Maschine ziehen Sie den Netzstecker von der Steckdose ab. Wenn die Maschine bei eingestecktem Netzkabel und -stecker bewegt wird, kann das Netzkabel beschädigt werden, was zu Bränden oder elektrischen Schlägen führen kann.

Bedienungs-Schutzmaßnahmen

Bringen Sie keinen Magneten in die Nähe des Sicherheitsschalters der Maschine. Ein Magnet kann die Maschine versehentlich aktivieren, was zu Verletzungen führen kann.

Verwenden Sie keine leicht entflammbaren Sprays oder Lösungsmittel in der Nähe der Maschine. Dadurch können Brände verursacht werden.

Beim Kopieren eines dicken Originals nicht starke Kraft verwenden, um es gegen das Originalauflageglas zu drücken. Das Glas kann brechen und Verletzungen verursachen.

Niemals den markierten Bereich in der Nähe der Heizwalze berühren. Dabei besteht die Gefahr von Verbrennungen. Wenn ein Blatt Papier um die Heizwalze gewickelt ist, versuchen Sie nicht, es selber zu entfernen, um Verletzungen oder Verbrennungen zu vermeiden. Schalten Sie das Gerät sofort aus und wenden Sie sich an Ihren Panasonic-Fachhändler.

Verwenden Sie kein leitendes Papier, wie z.b. Faltpapier, Karbonpapier oder beschichtetes Papier. Wenn ein Fehleinzug auftritt, kann dies zu Kurzschlüssen und Bränden führen.

Stellen Sie keine schweren Gegenstände auf die Maschine. Eine unbalancierte Maschine kann umkippen, oder schwere Gegenstände können herunterfallen, was zu Schäden und/oder Verletzungen führen kann.

Halten Sie den Raum gut gelüftet, wenn Sie die Maschine längere Zeit über verwenden, um die Ozondichte in der Luft zu minimieren.

Beim Kopieren mit offener Originalauflage-Abdeckung nicht direkt in die Belichtungslampe blicken. Direkte Bestrahlung des Auges kann zu Augenermüdung oder sogar zu Augenschäden führen.

Die Papierfächer langsam ziehen, um Verletzungen zu vermeiden.

Beim Entfernen von fehleingezogenem Papier stellen Sie sicher, dass keine abgerissenen Papierreste in der Maschine verbleiben. Ein in der Maschine verbleibendes Stück Papier kann Feuer fangen. Wenn ein Blatt Papier um die Heizwalze gewickelt ist oder wenn ein besonders schwieriger Papierfehleinzug behoben werden muss, versuchen Sie nicht, es selber zu entfernen. Dabei besteht die Gefahr von Verletzungen oder Vebrennungen. Schalten Sie das Gerät sofort aus und wenden Sie sich an Ihren Panasonic-Fachhändler.

Beim Zugriff auf Innenteile des Geräts zum Beheben von Papierfehleinzug usw. immer darauf achten, nicht heiße Stellen zu berühren; sonst besteht die Gefahr von Verbrennungen.

Sonstiges

- Beim Beheben eines Papierstaus oder einer anderen Störung das geeignete Verfahren entsprechend der Bedienungsanleitung befolgen.

Für Ihre Sicherheit

⚠ ACHTUNG

VerbrauchsmaterialienSchutzmaßnahmen

Verwenden Sie immer nur Batterien des vorgeschriebenen Typs.

Sonstiges

- Die Maschine hat eine eingebaute Schaltung zum Schutz gegen Stromspitzen durch Blitzschlag. Falls in der Nähe ein Gewitter mit Blitzschlägen auftritt, sorgen Sie für ausreichenden Abstand vom Gerät und berühren Sie das Gerät nicht, bevor das Gewitter beendet ist.
- Wenn Sie Flackern oder verzerrte Bilder oder Rauschen in Audio/Video-Geräten in der Nähe feststellen, kann es sein, dass die Maschine elektromagnetische Störungen erzeugt. Schalten Sie sie aus, und wenn die Störungen verschwinden ist die Maschine die Ursache der Störungen. Führen Sie das folgende Verfahren aus, bis die Störungen beseitigt sind.
  - Die Maschine und das Fernsehgerät und/oder Radio weiter voneinander entfernt aufstellen.
  - Die Maschine und das Fernsehgerät und/oder Radio anders aufstellen oder ausrichten.
  - Ziehen Sie den Netzstecker der Maschine, von Fernsehgerät und/oder Radio ab und stecken sie in Steckdosen ein, die zu getrennten Stromkreisen gehören.
  - Die Fernseh- und/oder Rundfunkantennen und -kabel anders ausrichten, bis die Störungen aufhören. Bei einer Außenantenne den örtlichen Elektriker um Unterstützung bitten.
  - Verwenden Sie eine Koaxkabelantenne.

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1 Specifications Table

1.1. Fax, Printer, Network Scanner and Internet Fax Functions

Items	Description		Remarks
	UF-8200(AU) UF-8300(Others)	**UF-7200(AU) UF-7300(Others)**	
Multi Function			
1 Copy Function	Yes		
2 Printer Function	Yes		GDI Print only
3 Scanner Function (Network only)	Yes	Option	
4 Facsimile Function (Mono)	Yes		
5 Internet Fax Function (Mono)	Yes	Option	

1.1.1. Fax Function

Items	Description		Remarks
	UF-8200(AU) UF-8300(Others)	**UF-7200(AU) UF-7300(Others)**	
Main Specifications			
1 Compatibility	Super G3 / G3		ITU-T Std & Non-Std
2 Modem Speed	33.6 - 2.4kbps		T.30/V.34/V.17/V.29/V.27ter
3 Coding Scheme	JBIG/MMR/MR/MH		
4 ECM	Yes		Conforms to ITU-T Rec. T.30 ECM
5 Short Protocol	Yes (B, D)		
6 Transmission Speed	Approx. 2.7 sec		ITU-T Image No. 1 (A4, Std Resolution)
7 Communication Resolution dpi x lpi (pels/mm x lines/mm)	**Transmission** Std. : 203 x 98 (8 x 3.85) Fine : 203 x 196 (8 x 7.7) S-Fine : 203 x 391 (8 x 15.4) 406 x 391 (16 x 15.4) 600dpi : 600 x 600 dpi **Reception** Std. : 203 x 98 (8 x 3.85) Fine : 203 x 196 (8 x 7.7) S-Fine : 203 x 391 (8 x 15.4) 406 x 391 (16 x 15.4) 600dpi : 600 x 600 dpi		600 dpi communication is only possible between T.30 Compliant Panafax, WORKiO, and other T.30 compliant machines.
Communication Ports			
1 PSTN Line Port	STD : 1 Line MAX : 2 Line		2nd G3 Option is available.
2 Leased Line Port	No		
3 V.24 Line Port	No		
4 LAN (Network)	Yes		Ethernet 10Base-T/100Base-TX
5 Centronics Parallel I/F	No		
6 USB Port	Yes		USB1.1
7 IEEE-1394	No		Firewire
8 Communication Port (Max)	3 Ports		
9 Multi Task Operation (Max)	5 Jobs		

Items	**Description**		**Remarks**
	UF-8200(AU) **UF-8300(Others)**	**UF-7200(AU)** **UF-7300(Others)**	
Communication Protocols			
1 PSTN	ITU-T G3 (T.30)		
2 Fax over the Internet	ITU-T T.37		
3 G3 Fax over IP Network	ITU-T T.37		
4 TCP/IP	Yes		
5 DHCP	Yes		
6 LDAP	Yes		
7 SMTP	Yes		
8 POP3	Yes		
9 NTLM	Yes		
10 FTP	Yes		
11 LPR/LPD	Yes		
12 SNMP	Yes		
13 MIB2	Yes		
Scanner Mechanism			
1 Scanning Device	CIS (ADF)		
2 Scanning Resolution /Speed			
Std: 203 x 98 (8 x 3.85) dpi x lpi (pels/mm x lines/ mm)	LTR : 0.7 sec A4 : 0.8 sec	LTR : 1.4 sec A4 : 1.5 sec	Excludes: Initializing Time, ADF slipping factor, and Data XMT Time. (Letter size for USA and Canada; A4 size for Other Destinations)
Fine: 203 x 196 (8 x 7.7) dpi x lpi (pels/mm x lines/ mm)	LTR : 1.4 sec A4 : 1.5 sec	LTR : 2.9 sec A4 : 3.0sec	
S-Fine: 406 x 391 (16 x 15.4) dpi x lpi (pels/mm x lines/ mm)	LTR : 5.7 sec A4 : 6.1 sec	LTR : 5.7 sec A4 : 6.1 sec	
150dpi: 150 x 150	LTR : 1.1 sec A4 : 1.1 sec	LTR : 2.2 sec A4 : 2.3 sec	
300dpi: 300 x 300	LTR : 2.2 sec A4 : 2.3 sec	LTR : 4.4 sec A4 : 4.6 sec	
600dpi: 600 x 600	LTR : 8.8 sec A4 : 9.3 sec	LTR : 8.8 sec A4 : 9.3 sec	
3 Document Size (Max.)	Legal 8.5 x 14 in (216 x 2000 mm)		
4 Effective Scanning Width	LTR : 8.3 in (212 mm) A4 : 8.2 in (208 mm)		(Letter size for USA and Canada; A4 size for Other Destinations)
5 ADF Capacity	100 sheets		Face Up, top feed LTR / A4 (20 lb / 75 g/m^2)
6 Collation Stack	Yes		Face Up
Printer Mechanism			
1 Recording Method	LP		
2 Recording Resolution Fax	600 x 600 dpi		
3 Recording Paper Size			
Paper Tray	Letter / Legal		For USA and Canada
	A4		For EU and Other Destinations
4 Effective Printing Width	LTR : 8.1 in (207mm) A4 : 7.9 in (201 mm)		Letter : USA and Canada A4 : Other Destinations

Items			Description		Remarks
			UF-8200(AU) UF-8300(Others)	UF-7200(AU) UF-7300(Others)	
5	Recording Paper Capacity		550 sheets		Tray 1 + 2 : Max. 1100 sheets LTR / A4 : 20 lb (75 g/m^2)
6	Paper Stack Capacity		300 sheets		
7	Collation Stack		Yes		Face Up
8	Consumable		All in One Cartridge		
9	Low Toner Warning		Yes		
Memory					
1	Fax Memory				
		Standard Memory (Flash)	12 MB (720 pages)	3 MB (180 pages)	ITU-T Image No.1 (A4, Std Resolution)
		Optional Memory (SD Memory Card)	32 MB to 2 GB (Max. 1,020 to 12,750 pages)		(Refer to 1.1.5.)
2	Printer Page Memory		32 MB		
3	Sort Memory		16 MB		
Copy Quality					
1	Halftone		Yes		256-Level Error Diffusion
2	Resolution		600 x 600 dpi		
3	Original Contrast Selection		Yes		5-Levels
4	Smoothing (Rx)				With Auto Picture / Text Recognition
		Fax, Copy	Yes		
		PC Printing Data	No		
5	2-Sided Copy		Yes		2→1 Only
Power Supply					
1	Power Requirement		99 - 132 VAC 47 - 63 Hz Single phase		120 VAC 50 / 60 Hz
			180 - 264 VAC 47 - 63 Hz Single phase		220 - 240 VAC 50 / 60 Hz
2	Power Consumption				
		Standby	11 W		120 VAC Power Supply
		Transmission	20 W		
		Reception	830 W		
		Copy	830 W		
		Maximum	Less than 1000 W		
		Standby	12.7 W		220 - 240 VAC Power Supply
		Transmission	21.3 W		
		Reception	730 W		
		Copy	730 W		
		Maximum	Less than 1000 W		
Ambient Conditions					
1	Temperature		50 - 80 °F / 10 - 30 °C		
2	Relative Humidity		30 - 80%RH		
3	Safety		UL60950-1 / CSA C22.2 No.60950-1		For USA and Canada
			EN60950-1		For EU and Other Destinations
4	EMI		Class B computing device peripheral in FCC Rules Part 15		For USA and Canada
5	Lead Free Solder (PbF)		This Product uses Lead Free (PbF) PCBs		Refer to the inner Front Cover and the Parts Manual for details

Items	Description		Remarks
	UF-8200(AU) UF-8300(Others)	UF-7200(AU) UF-7300(Others)	
Construction			
1 Dimensions (W x D x H)	17.3 x 17.7 x 14.2 in (440 x 450 x 360 mm)		Excluding projections
2 Weight (Excluding paper)	48.5 lb (22.0 kg)		Excluding consumable supplies and options
Consumables			
1 Toner Cartridge	Yield: 10 K		Letter/A4 3% coverage
Options			
1 Internet Fax / Email / Network Scanner Module	No (Std.)	Yes	
2 G3 Communication Port Kit	Yes		
3 SD Memory Card	Yes 32 MB - 2 GB		Use Genuine SD Memory Cards only.
4 2nd Paper Feed Module	Yes		
5 Handset Kit	Yes		
Multi-Task Operation			
1 Multi Task Operation	Yes		
2 Direct XMT Reserve	Yes		
3 Memory XMT Reserve	Yes		
4 Number of Memory Job Files	Yes		Max. 50 files
Dialing/Telephone Features			
1 Directory Search Dialing	Yes		
2 Directory Search (LDAP Email)	Yes		
3 Directory Search (LDAP Fax)	Yes		
4 One-Touch Auto Dialers	80 (40 x 2: Upper/Lower)		
5 Abbr. Auto Dialers	500 (max. 920)		Plus an additional 420 stations available to select from, when the optional SD Memory Card (Max.2GB) is installed.
6 Total Auto Dialers	580 (Max. 1,000)		
7 Program Dials	80		
8 Max. Number Digits (Fax)	36		
9 Max. Number Digits (Email)	60		
10 Max. Station Name Characters	15		
11 Full Number Dialing (Buffered Dialing)	Yes		Max. 50 stations
12 Direct Dialing (Monitor Dialing)	Yes		Voice mode
13 Automatic Redialing	Yes		Up to 15 times at 0 to 15 min. intervals
14 Manual Redialing	Yes		Pressing the REDIAL/PAUSE button
15 Line Monitor Speaker	Yes		
16 Chain Dialing (Hybrid Dial)	Yes		In Monitor Dialing mode only
17 Pulse / Tone Dialing	Yes		10 pps / DTMF
18 Pulse to Tone Change	Yes		
19 Flash Key	Yes		

Items		Description		Remarks
		UF-8200(AU) **UF-8300(Others)**	**UF-7200(AU)** **UF-7300(Others)**	
20	Handset	Option		
21	Fax Mistake Dial Prevention	Yes		
Transmission Features				
1	Direct Transmission	Yes		
2	Memory Transmission	Yes		Page Retransmission
3	Quick Memory Transmission	Yes		
4	Multi-Station Transmission (Sequential Broadcasting)	Yes		Max. 630 stations (580 One-Touch / Abbr. + 50 Full Number Dialing) Max.1000 stations when the SD Memory Card is installed
5	Direct Deferred Transmission	Yes		ADF Deferred Transmission
6	Deferred Transmission	Yes		Max. 50 timers
7	Deferred Multi-Station Transmission	Yes		
8	Priority Direct Transmission	Yes		Priority ADF Transmission
9	Priority Memory Transmission	No		
10	Batch Transmission	Yes		Real Time (up to 5 Files)
11	90 Degree Rotation Transmission	No		
12	Cover Sheet	Yes		
13	Confidential Mail Box	No		
14	Multi-Copy Transmission	No		
15	Memory Back-Up	Yes		**FAX**: Back-up with Flash Memory. **Copy / Printer**: No Back-up with D-RAM
16	Duplex Scanning	Yes		Scan twice, Fax once
Reception Features				
1	Substitute Reception	Yes		
2	Fixed Reduction	Yes		LTR/A4/LGL: 70 - 100% (in 1% Steps), Top & Left Alignment
3	Auto Reduction	Yes		LTR/A4/LGL: 70 - 100% (in 1% Steps), Top & Left Alignment
4	Overlap Printing	Yes		Page End Approx. 0.4 in (10 mm)
5	Receive to Memory	Yes		
6	Distinctive Ring Detector (DRD)	Yes		Specified Destinations only
7	90 Degree Rotation Reception	No		
8	Duplex Printing	No		
9	Junk Fax Prevention	Yes		
10	E-mail Report	Yes	No	

Items	Description		Remarks
	UF-8200(AU) UF-8300(Others)	UF-7200(AU) UF-7300(Others)	
Polling			
1 Polling	Yes		
2 Turnaround Polling	No		
3 Multi-Station Polling	Yes		
4 Deferred Polling	Yes		
5 Deferred Multi-Station Polling	Yes		
6 Direct Polling Tx	No		
7 Memory Polling Tx	Yes		1 File
8 Preset Polling Password	Yes		
9 Temporary Polling Password	Yes		
10 Continuous Polling	Yes		
Convenience			
1 Panel Display	Yes		
2 Voice Contact	No		
3 Edit File Mode	Yes		With View Mode
4 Incomplete File Save	Yes		With View Mode
5 Automatic Fax Cover Sheet	Yes		
Copy Features			
1 First Copy Time			
Letter	19 sec.	25 sec.	
A4			
2 Copy Speed			
Letter	Approx. 19 cpm		Paper Feed : 1st Paper Tray; Paper Exit: to Exit Tray; Continuous Copy Mode.
A4	Approx. 18 cpm		
3 Single Copy	Yes		
4 Multiple Copy	Yes		
5 Sort Copy	Yes		
6 Enlargement	Yes		
7 Reduction	Yes		
8 Zoom	Yes		71% - 141%
Certainty			
1 Verification Stamp	Yes		
2 Header / Total Page Print	Yes		
3 Transaction Journal	Yes		200 Transactions / with View Mode
4 Comm. Journal	Yes		With Image
5 Last Ind. XMT Journal	Yes		
6 Power Failure Report	No		
Printout Lists			
1 One-Touch List	Yes		
2 ABBR. No. List	Yes		
3 Program List	Yes		
4 Address Book Search List	Yes		Auto Dialer List
5 Fax Parameter List	Yes		

Items	Description		Remarks
	UF-8200(AU) **UF-8300(Others)**	**UF-7200(AU)** **UF-7300(Others)**	
6 File List	Yes		With View Mode
7 Ind. XMT Journal	Yes		
8 Directory Sheet	Yes		
Identifications			
1 Logo	Yes		25 Characters
2 Multiple Logo	Yes		
3 Character ID	Yes		16 Characters
4 Numeric ID	Yes		20 Digits
Special Communications			
1 Password XMT / RCV	Yes		
2 Selective Reception	Yes		TSI Check
3 Relay XMT Request	No		
4 Relay XMT Center	No		
5 Confidential XMT / Polling	No		
6 Confidential Center	No		
7 Mailbox XMT / Polling	No		
8 Mailbox Center	No		
9 File XMT	No		
10 Received Fax Forward	Yes		Received File Transfer
11 Sub-address XMT	Yes		
12 Sub-address Auto Routing	Yes		
13 NYSE	Yes		For USA and Canada only
14 Internet Fax Relay XMT	Yes		Internet Fax → Internet Fax → G3FAX
15 Email Relay XMT	Yes		PC → Internet Fax → G3FAX
16 Panafax Desktop	Yes		
Others			
1 Fax Access Code	Yes		
2 PIN Code Access	Yes		For USA and Canada only
3 Intelligent Redial (AI)	Yes		5 Files
4 Department Code	Yes		50 Departmental Codes
5 Power Saver Mode	Yes		
6 Self Diagnostic Function	Yes		
7 Remote Diagnostic Function	Yes		Specific Destinations only
8 Check & Call Function	Yes		
9 V.24 / Encryption Interface	No		
10 User Authentication	Yes		Specific Destinations only
11 Job Tracking	Yes		Specific Destinations only
12 RightFax Server	Yes		Specific Destinations only
Firmware Update			
1 Local Update			
SD Memory Card	Yes		
USB Port	Yes		
2 LAN (Network)	Yes		

1.1.2. Printer Function

Items		Description UF-8300/8200/7300/7200	Remarks
Interface			
1	Centronics Parallel I/F	No	
2	LAN (Network)	Yes	Ethernet 10Base-T/100Base-TX
3	USB Port	Yes	USB1.1
4	IEEE-1394	No	Firewire
Printer Function			
1	Printing Size	LGL / LTR / A4	
2	Bypass	No	
3	Stapling	No	
4	Printing Resolution (dpi)	600 x 600 / 300 x 300 dpi	
5	Interface	USB / Ethernet	
6	OS	Win 2000 / Win XP / Win 2003 / Win Vista	
7	Printer Work Memory Size	22 MB	Not expandable
8	GDI	Yes	
9	PDL (PCL6)	No	
10	PDL (PS3)	No	
11	Duplex Printing	No	
12	Collation Stack	Yes	
13	Status Monitor		
	Network	Yes	
	USB	No	
14	Network Status Monitor	Yes	
15	Smoothing	Yes	
16	Applicable PC	IBM PC, AT or Compatible	
17	Multi-Task Operation		
	Printing while Fax-XMT from Memory	Yes	
	Printing while Fax-RCV into Memory	Yes	
	Fax-XMT from Memory while Printing	Yes	
	Fax-RCV into Memory while Printing	Yes	
18	Output to separate tray for Printing, Fax, Copy	No	
19	Font	No	
20	Secure Mailbox	Yes	Requires Optional SD Memory Card (256 MB - 2 GB). Max. 10 mailboxes.

1.1.3. Network Scanner Function

Items	Description		Remarks
	UF-8200(AU) UF-8300(Others)	UF-7200(AU) UF-7300(Others)	
Interface			
1 Centronics Parallel I/F	No		
2 LAN (Network)	Yes		Ethernet 10Base-T/100Base-TX
3 USB Port	No		
4 IEEE-1394	No		Firewire
Network Scanning Function			
1 Scanning Device	CIS		
2 Scanning Speed (ADF)			
Mono			Excludes: Initializing Time, ADF slipping factor, and Data XMT Time. (Letter size for USA and Canada; A4 size for Other Destinations)
150dpi: 150 x 150	LTR : 1.1 sec A4 : 1.1 sec	LTR : 2.2 sec A4 : 2.3 sec	
300dpi: 300 x 300	LTR : 2.2 sec A4 : 2.3 sec	LTR : 4.4 sec A4 : 4.6 sec	
600dpi: 600 x 600	LTR : 8.8 sec A4 : 9.3 sec	LTR : 8.8 sec A4 : 9.3 sec	
Color	No		
3 Halftone	256 Halftone shades		With Error Diffusion
4 Max. Document Size	Legal 8.5 x 14 in (216 x 356 mm)		
5 Scanning Resolution (dpi)			
Mono	600 x 600 300 x 300 150 x 150		Default: 300 dpi
6 OS	Win 2000 / Win XP / Win 2003 / Win Vista		
7 2-Sided Scanning	No		
8 File Format	Multi-page TIFF / PDF		
9 Completion Notice	Yes		Auto Pop-up on the PC Screen
10 Protocol	TCP/IP / Non-Std		
Network Address Features			
1 One Touch Address Keys	80		Shared with Fax/Internet Fax One-Touch Address, 80 in Total
2 Abbr. Address Numbers	20		Independent for Network Scanner

1.1.4. Internet Fax Function

Items	Description	Remarks
	UF-8300/8200/7300/7200	
Main Specifications		
1 Communication Protocols	SMTP / POP3 / MIME	
2 Max. Modem Speed	NA	
3 Coding Scheme	JBIG/MMR/MR/MH	
4 File Format	TIFF / PDF	Selectable (PDF formats are used for Scan-to-Email, current Internet Fax standards do not support these file formats)
5 Line Interface	RJ-45	Ethernet LAN
Scanner Mechanism		
1 Max. Document Size	Legal 216 x 2000 mm	
2 Effective Scanning Width	LTR : 8.3 in (212 mm) A4 : 8.2 in (208 mm)	Letter size: for USA and Canada A4 size : for Other Destinations
3 Scanning Resolution dpi x lpi (pel/mm x lines/mm)	Std : 203 x 98 (8 x 3.85) Fine : 203 x 196 (8 x 7.7) S-Fine : 203 x 391 (8 x 15.4) : 406 x 391 (16 x 15.4) 600dpi : 600 x 600 dpi	LAN: 600 dpi, 16 x 15.4 Scanning Resolution is available.
Printer Mechanism		
1 Printing Resolution	600 dpi	
2 Effective Recording Width	LTR : 8.1 in (207 mm) A4 : 7.9 in (201 mm)	
Transmission Features		
1 Multi-Task Operation	Yes	Convenient simultaneous G3 Fax and LAN operation.
2 Memory Transmission	Yes	
3 Sequential Multi-Station Transmission	Yes	
4 Simultaneous Multi-Station Transmission	Yes	Max. 630 stations (580 One-Touch / Abbr. + 50 Full Number Dialing) Max.1000 stations when the SD Memory Card is installed
5 Sender Selection	Yes	
6 G3 / Email Mixed Broadcasting	Yes	
7 Deferred Transmission	Yes	
8 Fax Forward	Yes	Received File Transfer
9 Sub-address RCV	Yes	Inbound Routing
10 Mail Header		
Email Header Print Selection	Yes	All or From / To / Subject only
Subject Line	Random Entry	
LAN Features		
1 Internet Fax Communication	Yes	
2 Internet Mail Reception	Yes	

Items			Description	Remarks
			UF-8300/8200/7300/7200	
	3	Internet Fax Server Features		
		Internet Fax Relay XMT	Yes	Internet Fax → Internet Fax → G3FAX
		Email Relay XMT	Yes	PC → Internet Fax → G3FAX
		Received Fax / Email Forward	Yes	Local print available
		PC FAX Transmission	Yes	Panafax Desktop Only (Network)
		Inbound Routing	Yes	Using Sub-Address. Local print available
		Phone Book Registration from PC	Yes	Via Email or Network Address Editor
	4	Internet Fax Parameters Registration via Email	Yes	
	5	Internet Delivery Confirmation	Yes	With MDN
	6	Network Scanning	Yes	600 dpi
	7	Network Printing		
		LPR / LPD	Yes	600 dpi
		GDI	Yes	600 dpi
		PDL	No	
	8	DHCP Client	Yes	
	9	LDAP	Yes	Lightweight Directory Access Protocol
	10	TIFF Viewer	Yes	Selectable, PDMS / TIFF Viewer
	11	NYSE	Yes	For USA and Canada only
Certainty				
	1	Comm. Journal (w / Image)	Yes	
ID				
	1	Email Address	Yes	

1.1.5. SD Memory Card

SD Memory Card Format Structure and Allocation by Function

SD Memory Card Format Structure							
SD Memory Size	32 MB	64 MB	128 MB	256 MB	512 MB	1 GB	2 GB
Max. Number of Pages	1,020	2,900	6,800	12,750	12,750	12,750	12,750
Memory Allocation Usage by Function							
Function	32 MB	64 MB	128 MB	256 MB	512 MB	1 GB	2 GB
1000-Station Auto-Dialer	Yes						
Job MIB Data	Yes						
G3 Fax/Internet Fax Scan-to-Email Scan-to-PC/File	Yes						
Mailbox Print Secure Mailbox Print (See Note: 5.)	N/A	N/A	N/A	Yes (50 pages)	Yes (105 pages)	Yes (210 pages)	Yes (420 pages)

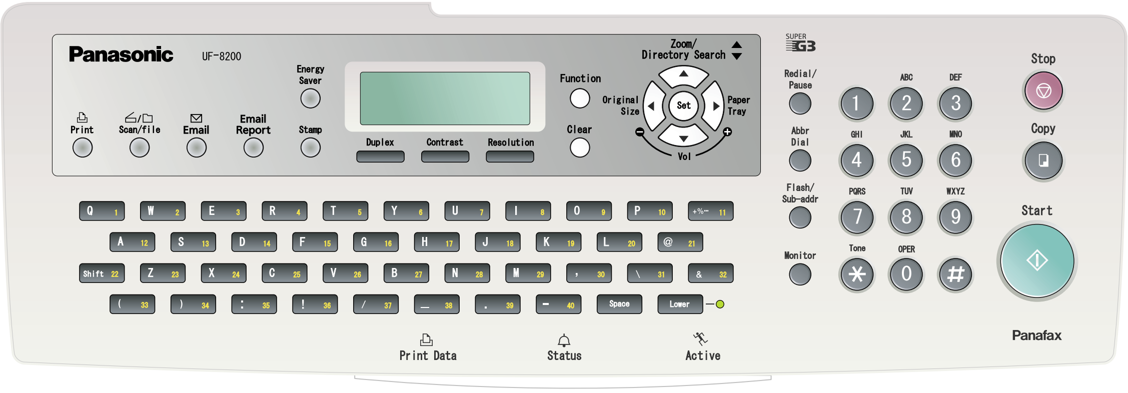
Note:

1. This function is available only when an SD Memory Card is installed.
2. Max. Number of Pages is based on ITU-T Image No.1 (A4, Standard Resolution).
3. Max. XMT file management number (G3 Fax / Internet Fax) = Max. 255 pages/file, Max 50 Files; Scan to PC/File = Max. 999 pages.
4. Max. RCV file management number (G3 Fax / Internet Fax) = Max. 999 pages.
   With 2nd G3 Option installed = Max. 999 pages/Channel.
5. One Mailbox accepts a maximum of 20 print jobs. A 256 MB up to 2 GB SD Memory Card stores approximately 50-420 pages of PCL bitmap print data.
6. Once the SD Memory Card is installed, the standard Fax & Internet Fax Flash Memory and the Network Scanning D-RAM is no longer used.
7. Max. page number may differ depending on the manufacturer of the SD Memory Card.

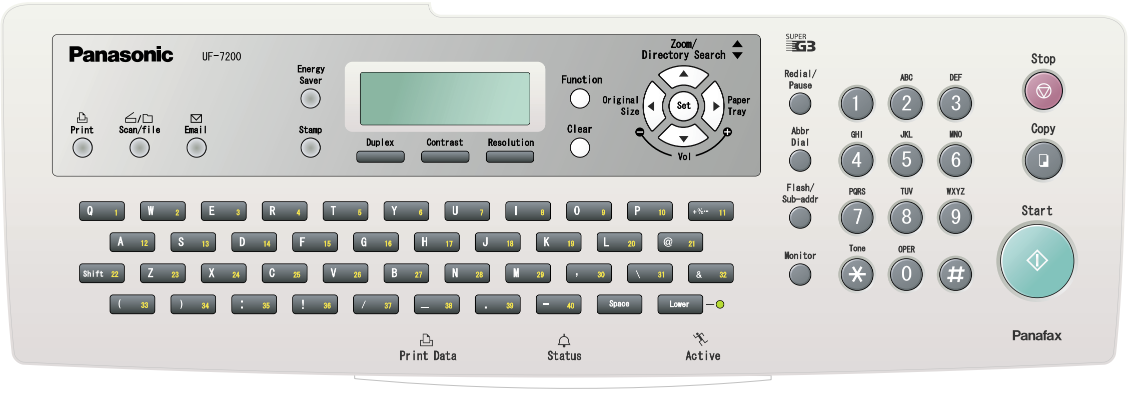
1.2. Control Panel

For USA and Canada

Panafax UF-8200

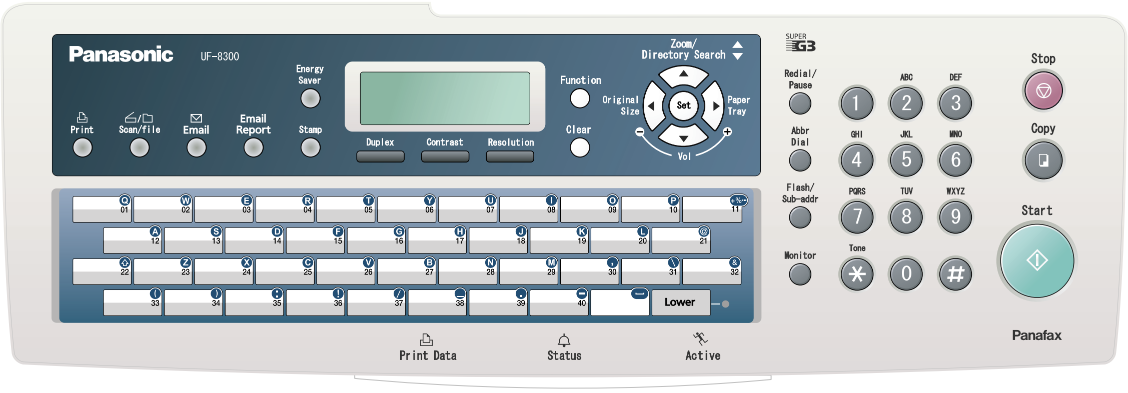

Panasonic
UF-8200
Energy Saver
Print
Scan/file
Email
Email Report
Stamp
Duplex
Contrast
Resolution
Function
Zoom/ Directory Search
Original Size
Set
Paper Tray
Clear
Vol
SUPER G3
Redial/ Pause
Abbr Dial
Flash/ Sub-addr
Monitor
1
ABC 2
DEF 3
GHI 4
JKL 5
MNO 6
PQRS 7
TUV 8
WXYZ 9
Tone
OPER 0
#
Stop
Copy
Start
Q W E R T Y U I O P
A S D F G H J K L @
Shift Z X C V B N M , \ &
( ) : ! / _ . - Space Lower
Print Data
Status
Active
Panafax

Panafax UF-7200

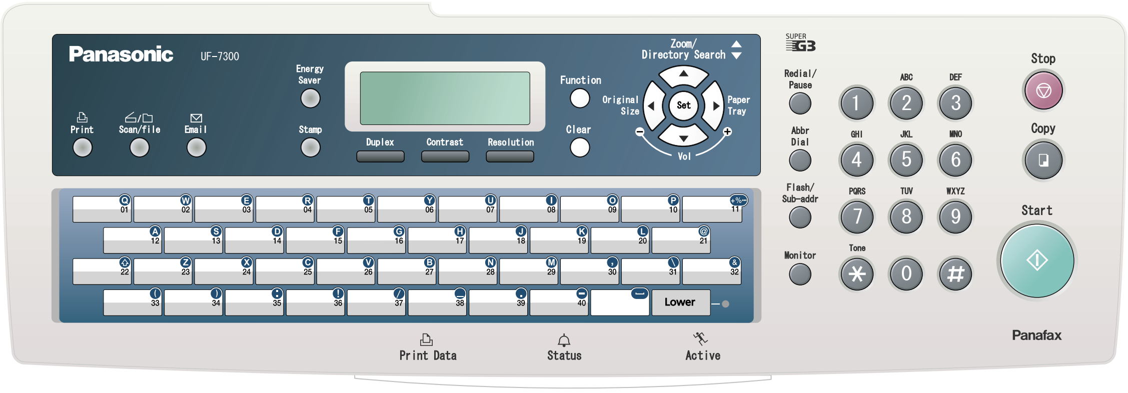

Panasonic
UF-7200
Energy Saver
Print
Scan/file
Email
Stamp
Duplex
Contrast
Resolution
Function
Zoom/ Directory Search
Original Size
Set
Paper Tray
Clear
Vol
SUPER G3
Redial/ Pause
Abbr Dial
Flash/ Sub-addr
Monitor
Tone
OPER
Stop
Copy
Start
Space
Lower
Print Data
Status
Active
Panafax

For Other Destinations

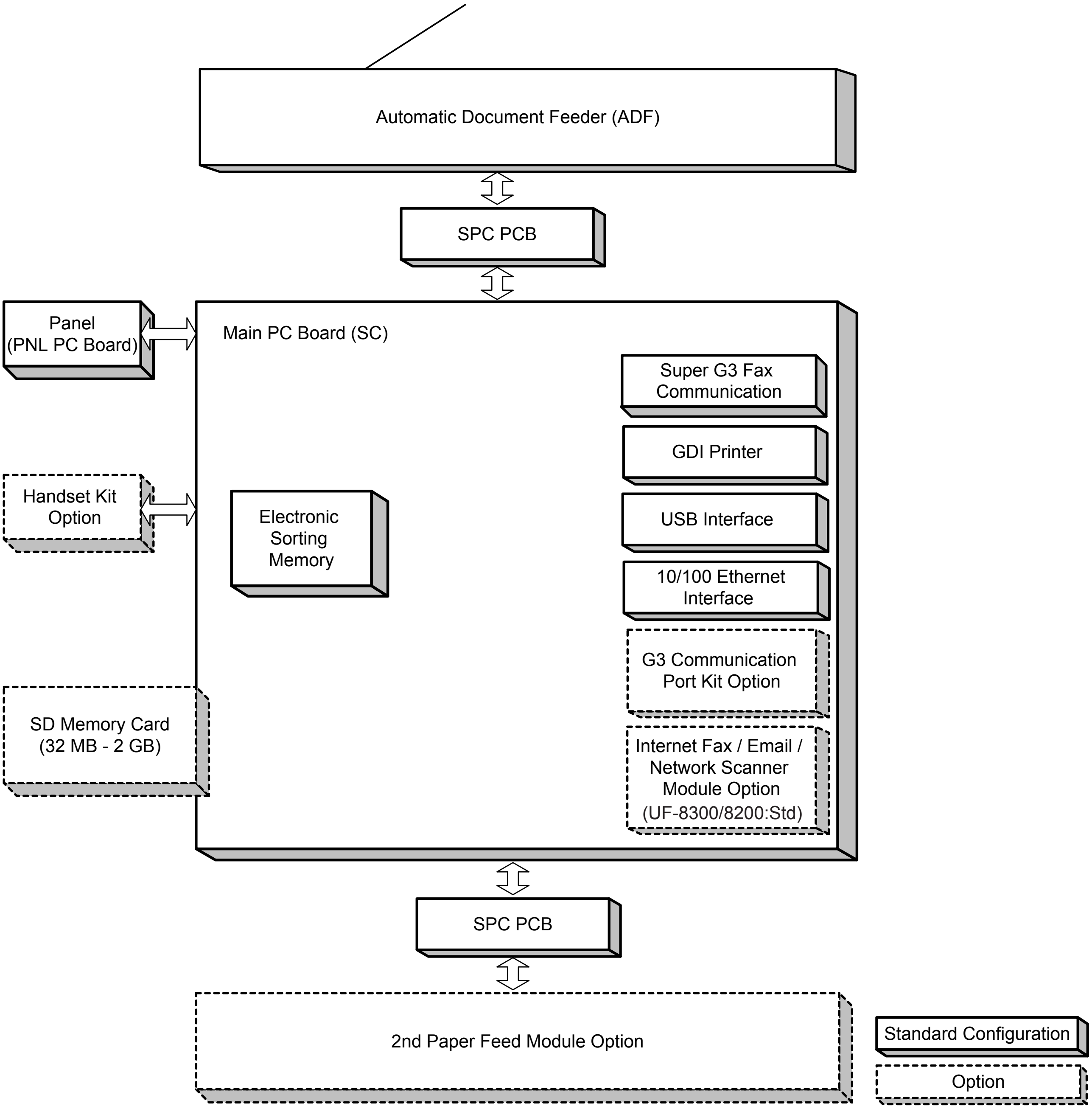
Panafax UF-8300


Panasonic
UF-8300
Energy Saver
Print
Scan/file
Email
Email Report
Stamp
Duplex
Contrast
Resolution
Function
Zoom/ Directory Search
Original Size
Set
Paper Tray
Clear
Vol
SUPER G3
Redial/ Pause
Abbr Dial
Flash/ Sub-addr
Monitor
Tone
Stop
Copy
Start
Lower
Print Data
Status
Active
Panafax

Panafax UF-7300


Panasonic
UF-7300
Energy Saver
Print
Scan/file
Email
Stamp
Duplex
Contrast
Resolution
Function
Zoom/ Directory Search
Original Size
Set
Paper Tray
Clear
Vol
SUPER G3
Redial/ Pause
Abbr Dial
Flash/ Sub-addr
Monitor
Tone
Stop
Copy
Start
Lower
Print Data
Status
Active
Panafax

1.3. System Combination


Automatic Document Feeder (ADF)
SPC PCB
Panel
(PNL PC Board)
Main PC Board (SC)
Super G3 Fax
Communication
GDI Printer
Handset Kit
Option
Electronic
Sorting
Memory
USB Interface
10/100 Ethernet
Interface
G3 Communication
Port Kit Option
SD Memory Card
(32 MB - 2 GB)
Internet Fax / Email /
Network Scanner
Module Option
(UF-8300/8200:Std)
SPC PCB
2nd Paper Feed Module Option
Standard Configuration
Option

1.4. Options List

Options

Option Name	Option Number	Remarks
Internet Fax / Email / Network Scanner Module	UE-404093	For UF-7300/7200
G3 Communication Port Kit	UE-407029	
2nd Paper Feed Module	UE-409080	
Handset Kit	UE-403185	
SD Memory Card	----	32 MB up to 2 GB Use Genuine SD Memory Cards only

Supplies

Part Name	Part Number	Remarks
All in One Cartridge	UG-5570	For USA and Canada
	UG-5575	For Other Destinations

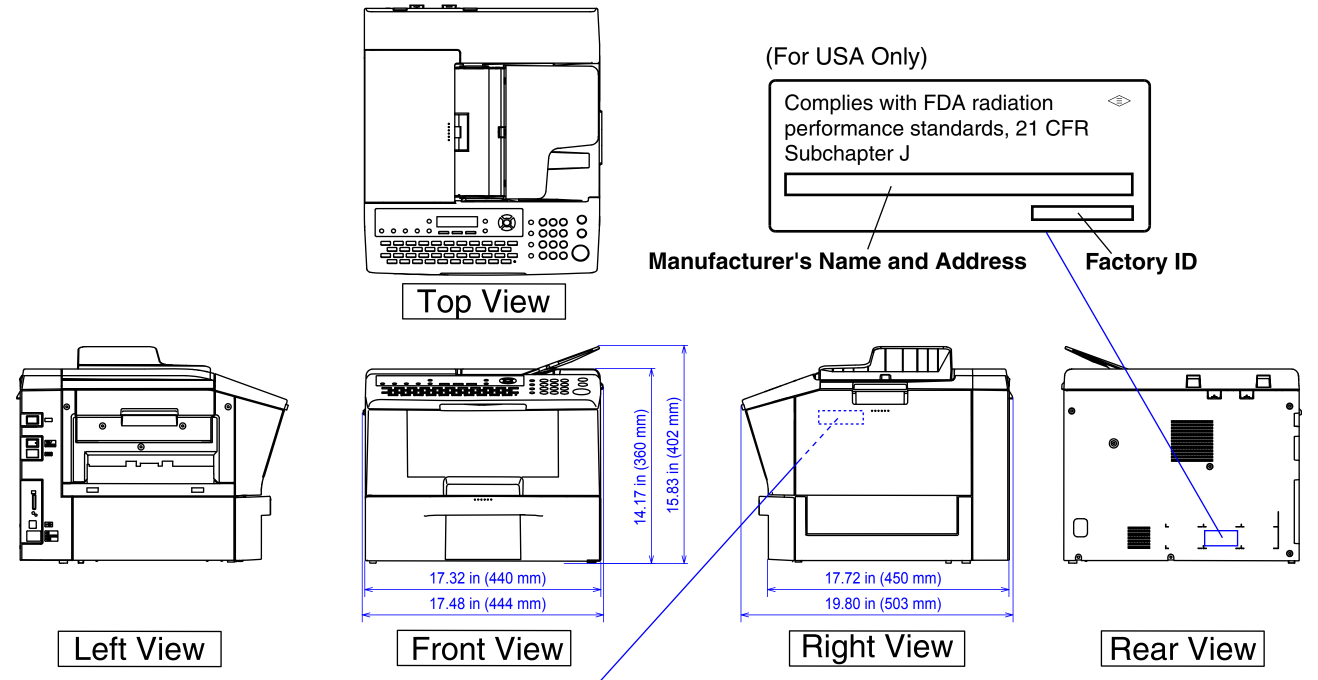
Note:

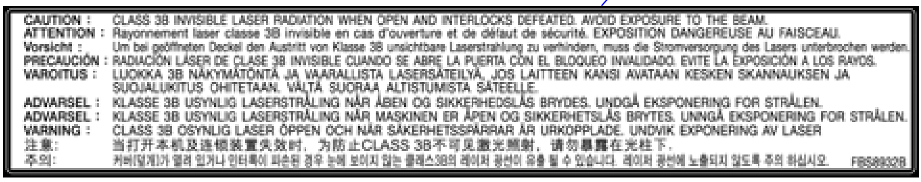
1. The Part Name(s) / Part Number(s) differ depending on the Models and the Destinations.
2. Availability may differ as per destination. Please ask your sales company for detail.
3. Genuine SD Memory Cards depict an SD Logo on their label.
   (Panasonic's 512 MB Sample is shown below).

Panasonic
LOCK
SD
512MB

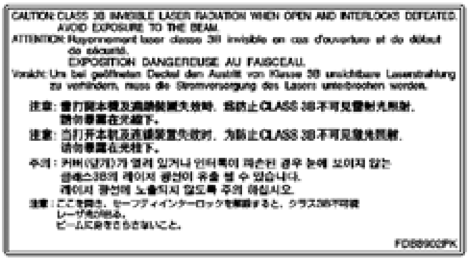
1.5. External View

1. Standard Configuration


Top View
(For USA Only)
Complies with FDA radiation performance standards, 21 CFR Subchapter J
Manufacturer's Name and Address
Factory ID
14.17 in (360 mm)
15.83 in (402 mm)
17.32 in (440 mm)
17.48 in (444 mm)
17.72 in (450 mm)
19.80 in (503 mm)
Left View
Front View
Right View
Rear View

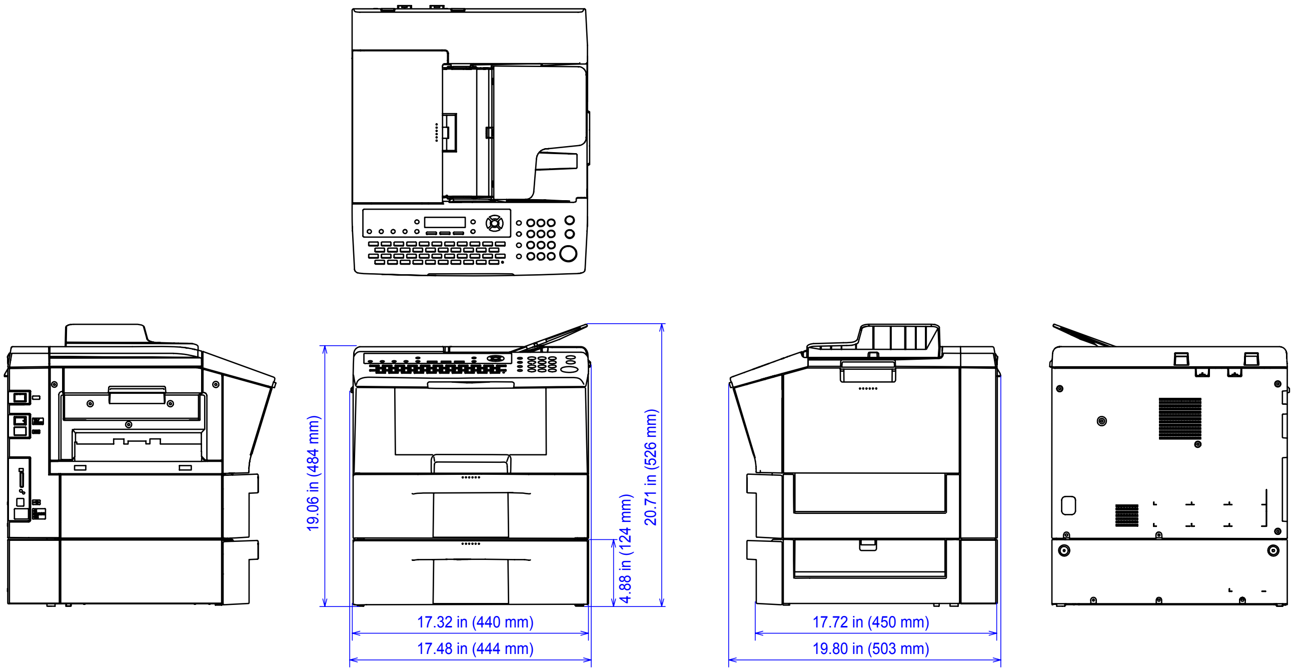


CAUTION : CLASS 3B INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO THE BEAM.
ATTENTION : Rayonnement laser classe 3B invisible en cas d'ouverture et de défaut de sécurité. EXPOSITION DANGEREUSE AU FAISCEAU.
Vorsicht : Um bei geöffneten Deckel den Austritt von Klasse 3B unsichtbare Laserstrahlung zu verhindern, muss die Stromversorgung des Lasers unterbrochen werden.
PRECAUCIÓN : RADIACIÓN LÁSER DE CLASE 3B INVISIBLE CUANDO SE ABRE LA PUERTA CON EL BLOQUEO INVALIDADO. EVITE LA EXPOSICIÓN A LOS RAYOS.
VAROITUS : LUOKKA 3B NÄKYMÄTÖNTÄ JA VAARALLISTA LASERSÄTEILYÄ, JOS LAITTEEN KANSI AVATAAN KESKEN SKANNAUKSEN JA SUOJALUKITUS OHITETAAN. VÄLTÄ SUORAA ALTISTUMISTA SÄTEELLE.
ADVARSEL : KLASSE 3B USYNLIG LASERSTRÅLING NÅR ÅBEN OG SIKKERHEDSLÅS BRYDES. UNDGÅ EKSPONERING FOR STRÅLEN.
ADVARSEL : KLASSE 3B USYNLIG LASERSTRÅLING NÅR MASKINEN ER ÅPEN OG SIKKERHETSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VARNING : CLASS 3B OSYNLIG LASER ÖPPEN OCH NÄR SÄKERHETSSPÄRRAR ÄR URKOPPLADE. UNDVIK EXPONERING AV LASER
注意: 当打开本机及连锁装置失效时，为防止CLASS 3B不可见激光照射，请勿暴露在光柱下。
주의: 커버(덮개)가 열려 있거나 인터록이 파손된 경우 눈에 보이지 않는 클래스3B의 레이저 광선이 유출 될 수 있습니다. 레이저 광선에 노출되지 않도록 주의 하십시오. FBS8932B



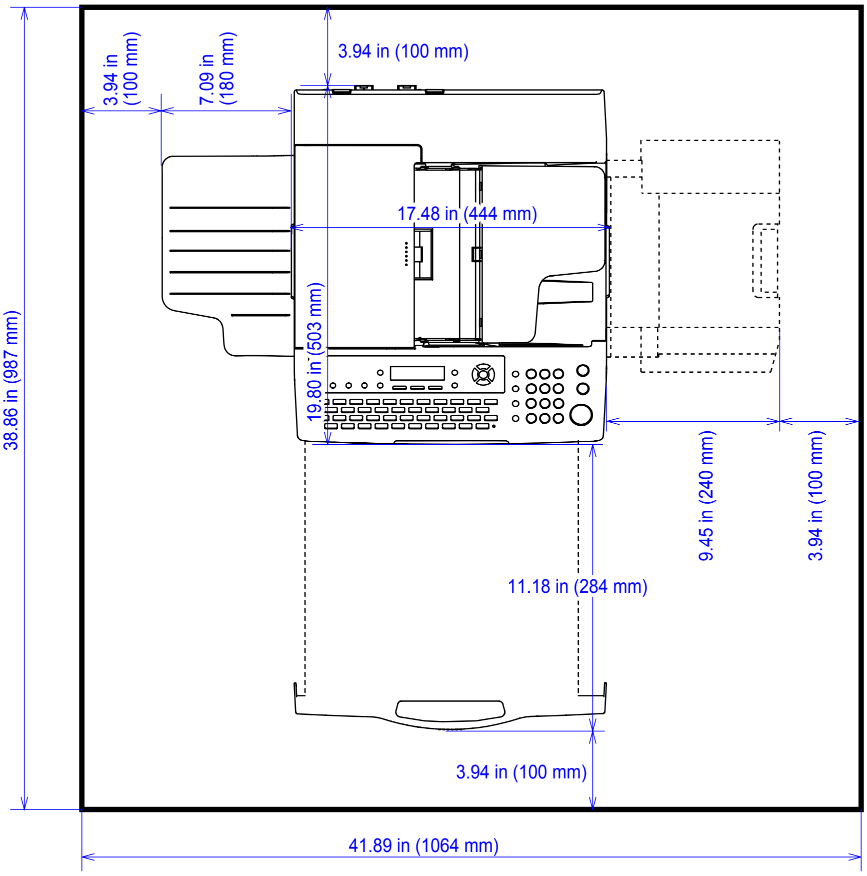
CAUTION: CLASS 3B INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED.
AVOID EXPOSURE TO THE BEAM.
ATTENTION: Rayonnement laser classe 3B invisible en cas d'ouverture et de défaut de sécurité.
EXPOSITION DANGEREUSE AU FAISCEAU.
Vorsicht: Um bei geöffneten Deckel den Austritt von Klasse 3B unsichtbare Laserstrahlung zu verhindern, muss die Stromversorgung des Lasers unterbrochen werden.
注意: 當打開本機及連鎖裝置失效時，為防止CLASS 3B不可見雷射光照射，請勿暴露在光線下。
注意: 当打开本机及连锁装置失效时，为防止CLASS 3B不可见激光照射，请勿暴露在光柱下。
주의: 커버(덮개)가 열려 있거나 인터록이 파손된 경우 눈에 보이지 않는 클래스3B의 레이저 광선이 유출 될 수 있습니다.
레이저 광선에 노출되지 않도록 주의 하십시오.
注意: ここを開き、セーフティインターロックを解除すると、クラス3B不可視レーザ光が出る。
ビームに身をさらさないこと。
FDS8902PK

2. With Optional 2nd Paper Feed Module Configuration

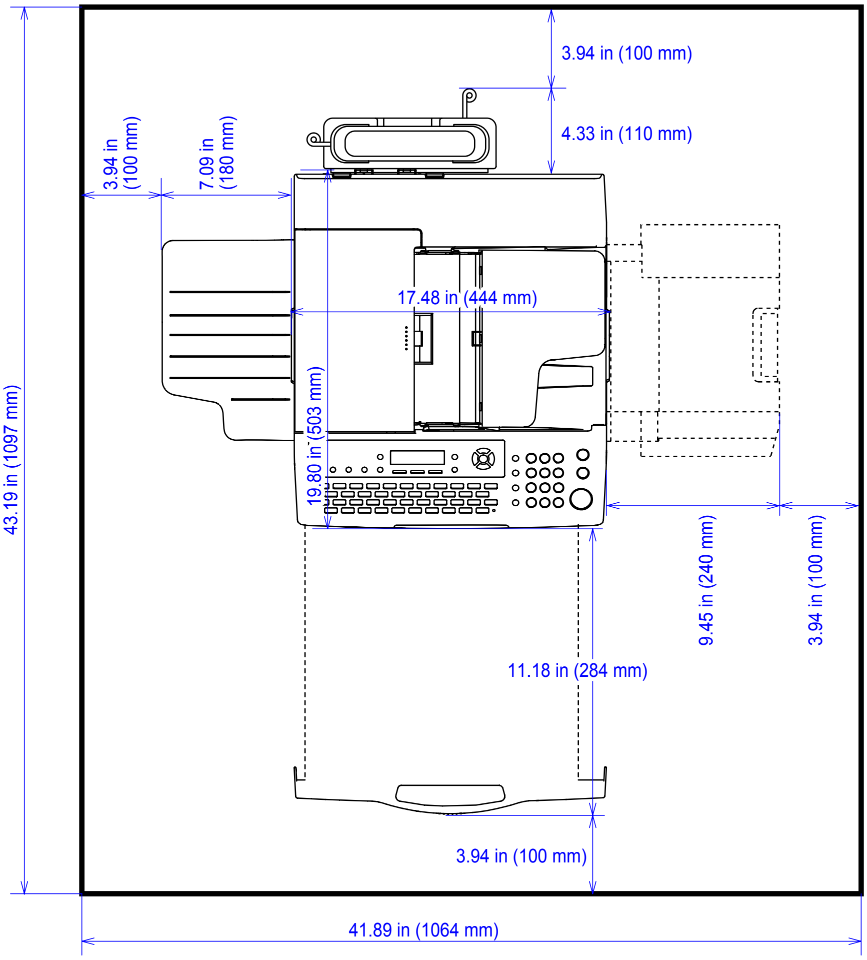

19.06 in (484 mm)
20.71 in (526 mm)
4.88 in (124 mm)
17.32 in (440 mm)
17.48 in (444 mm)
17.72 in (450 mm)
19.80 in (503 mm)

3. Space Requirements

Main Unit

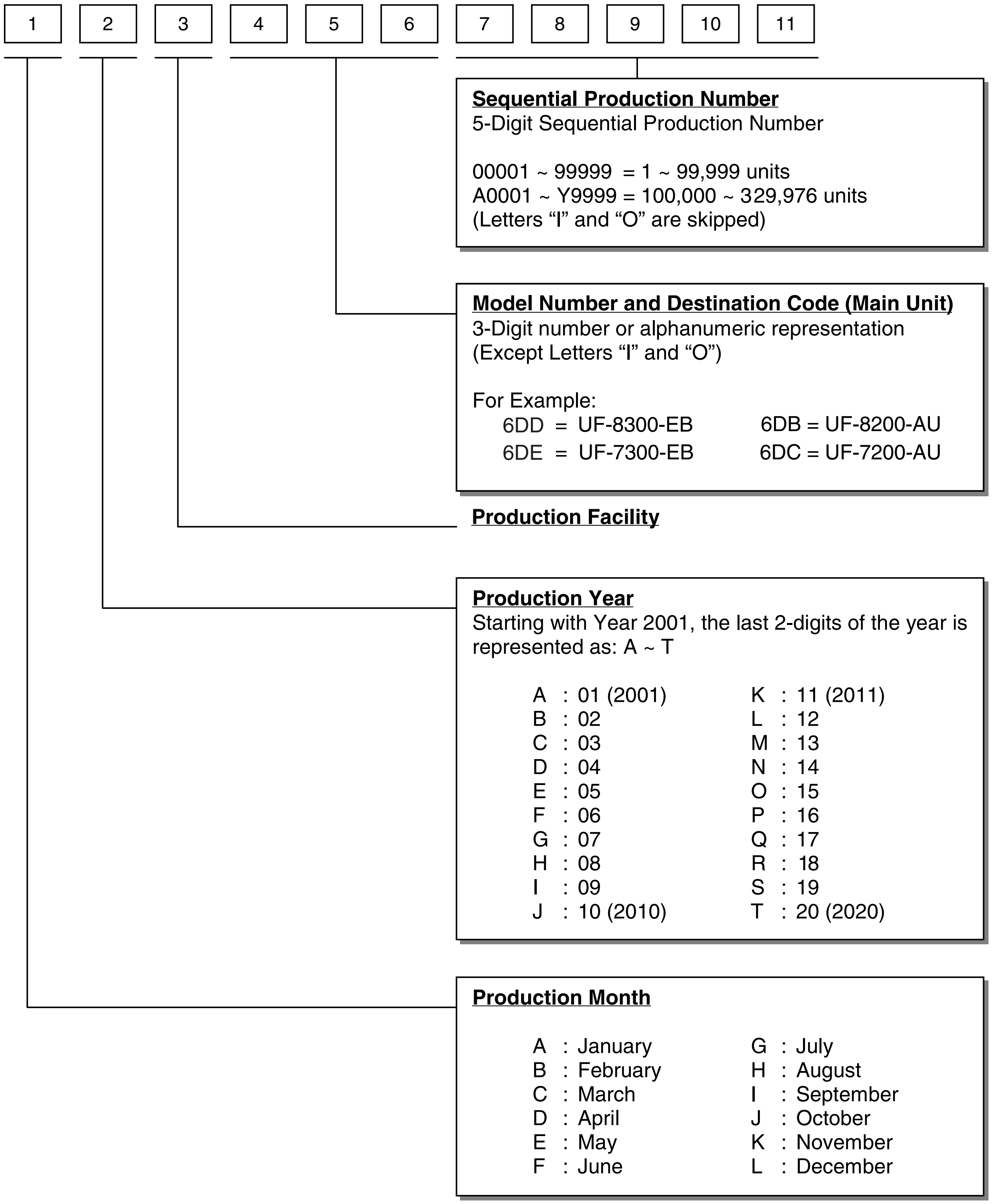

3.94 in (100 mm)
7.09 in (180 mm)
3.94 in (100 mm)
17.48 in (444 mm)
19.80 in (503 mm)
38.86 in (987 mm)
9.45 in (240 mm)
3.94 in (100 mm)
11.18 in (284 mm)
3.94 in (100 mm)
41.89 in (1064 mm)

Main Unit + Handset Option


3.94 in (100 mm)
4.33 in (110 mm)
3.94 in (100 mm)
7.09 in (180 mm)
17.48 in (444 mm)
19.80 in (503 mm)
43.19 in (1097 mm)
9.45 in (240 mm)
3.94 in (100 mm)
11.18 in (284 mm)
3.94 in (100 mm)
41.89 in (1064 mm)

1.5.1. Serial Number Contents

The contents of the 11-digit Serial Number is as follows:



Sequential Production Number
5-Digit Sequential Production Number

00001 ~ 99999 = 1 ~ 99,999 units
A0001 ~ Y9999 = 100,000 ~ 329,976 units
(Letters “I” and “O” are skipped)

Model Number and Destination Code (Main Unit)
3-Digit number or alphanumeric representation
(Except Letters “I” and “O”)

For Example:
6DD = UF-8300-EB
6DE = UF-7300-EB
6DB = UF-8200-AU
6DC = UF-7200-AU

Production Facility

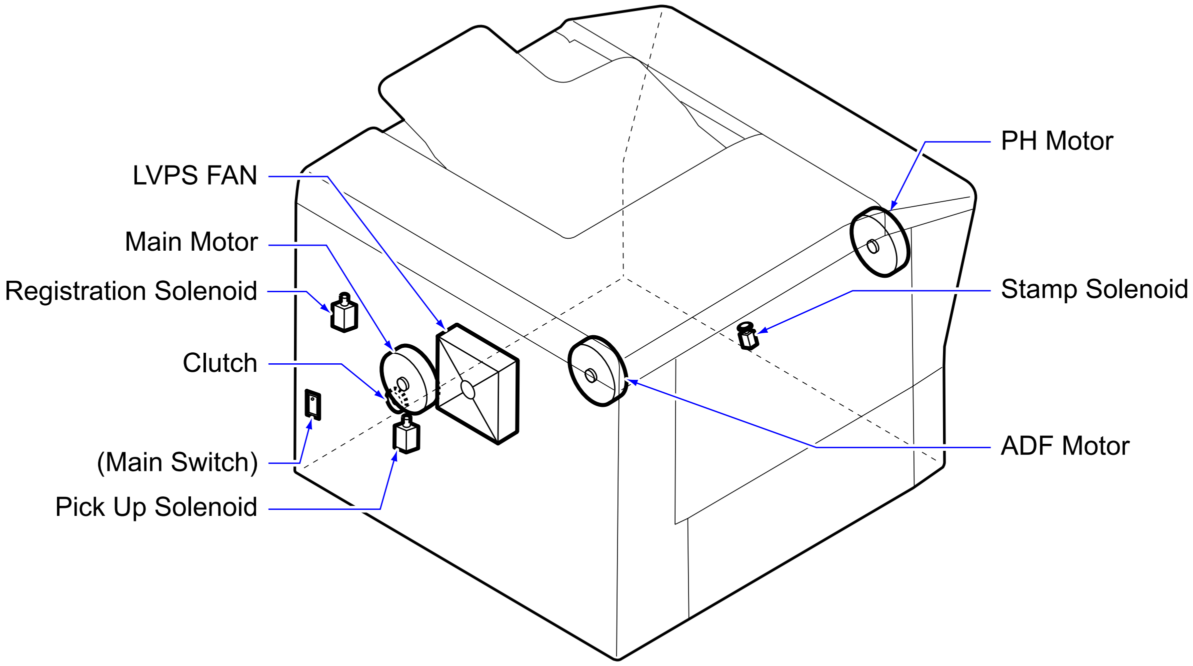
Production Year
Starting with Year 2001, the last 2-digits of the year is represented as: A ~ T

A : 01 (2001)
B : 02
C : 03
D : 04
E : 05
F : 06
G : 07
H : 08
I : 09
J : 10 (2010)
K : 11 (2011)
L : 12
M : 13
N : 14
O : 15
P : 16
Q : 17
R : 18
S : 19
T : 20 (2020)

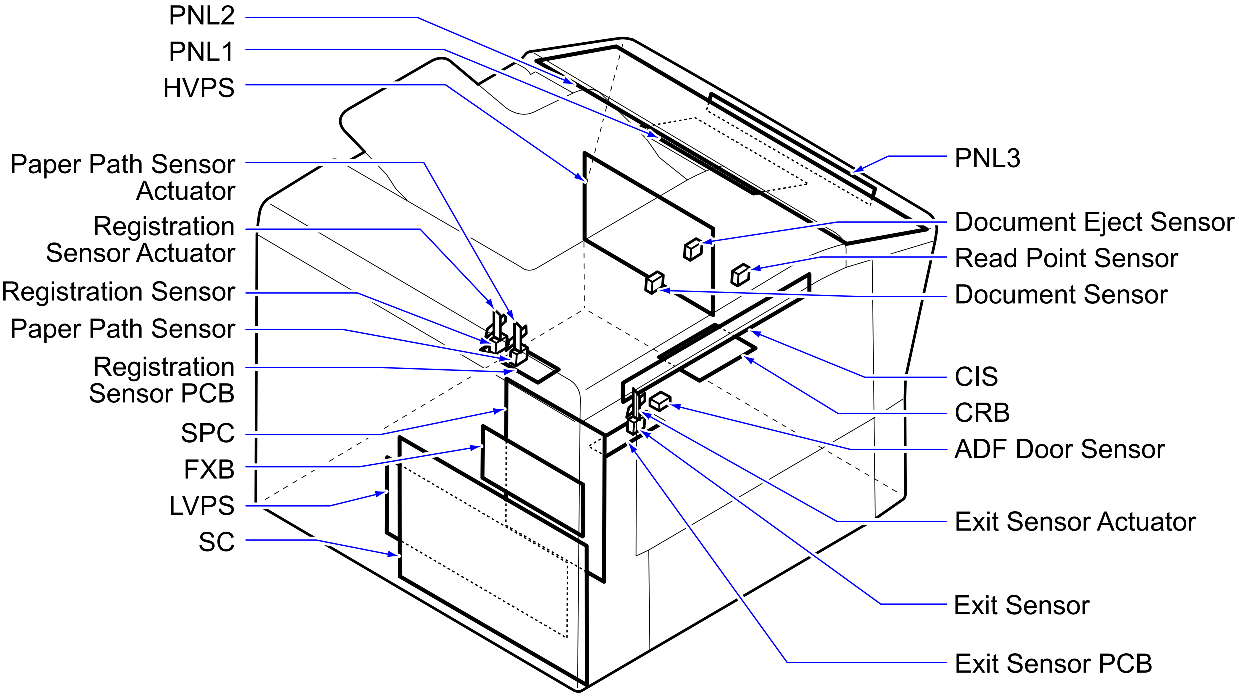
Production Month

A : January
B : February
C : March
D : April
E : May
F : June
G : July
H : August
I : September
J : October
K : November
L : December

1.6. Clutches, Switches, Motors, Solenoids and Fan

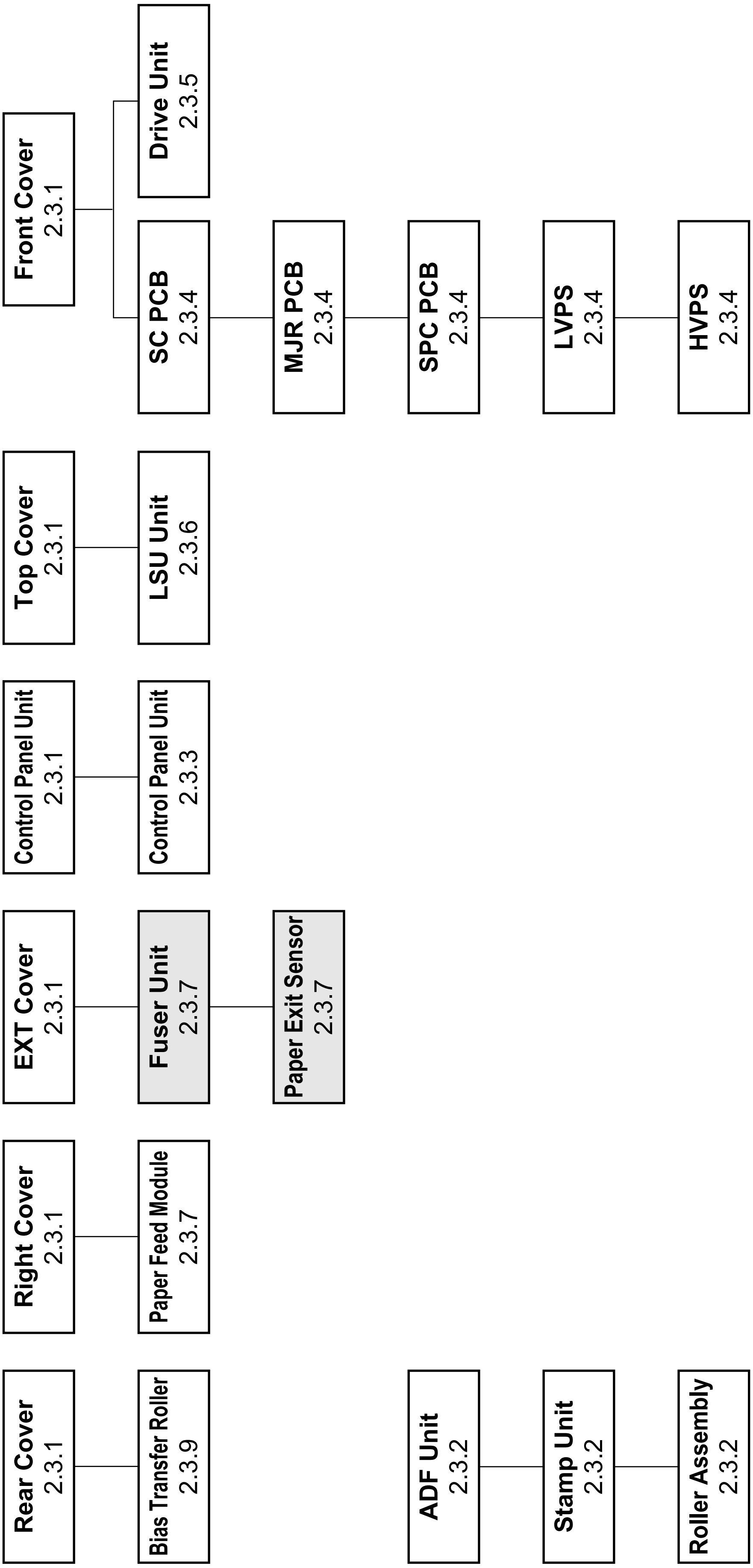

LVPS FAN
Main Motor
Registration Solenoid
Clutch
(Main Switch)
Pick Up Solenoid
PH Motor
Stamp Solenoid
ADF Motor

1.7. Sensors and PC Boards


PNL2
PNL1
HVPS
Paper Path Sensor Actuator
Registration Sensor Actuator
Registration Sensor
Paper Path Sensor
Registration Sensor PCB
SPC
FXB
LVPS
SC
PNL3
Document Eject Sensor
Read Point Sensor
Document Sensor
CIS
CRB
ADF Door Sensor
Exit Sensor Actuator
Exit Sensor
Exit Sensor PCB

2 Disassembly Instructions

2.1. General Disassembly Flowchart

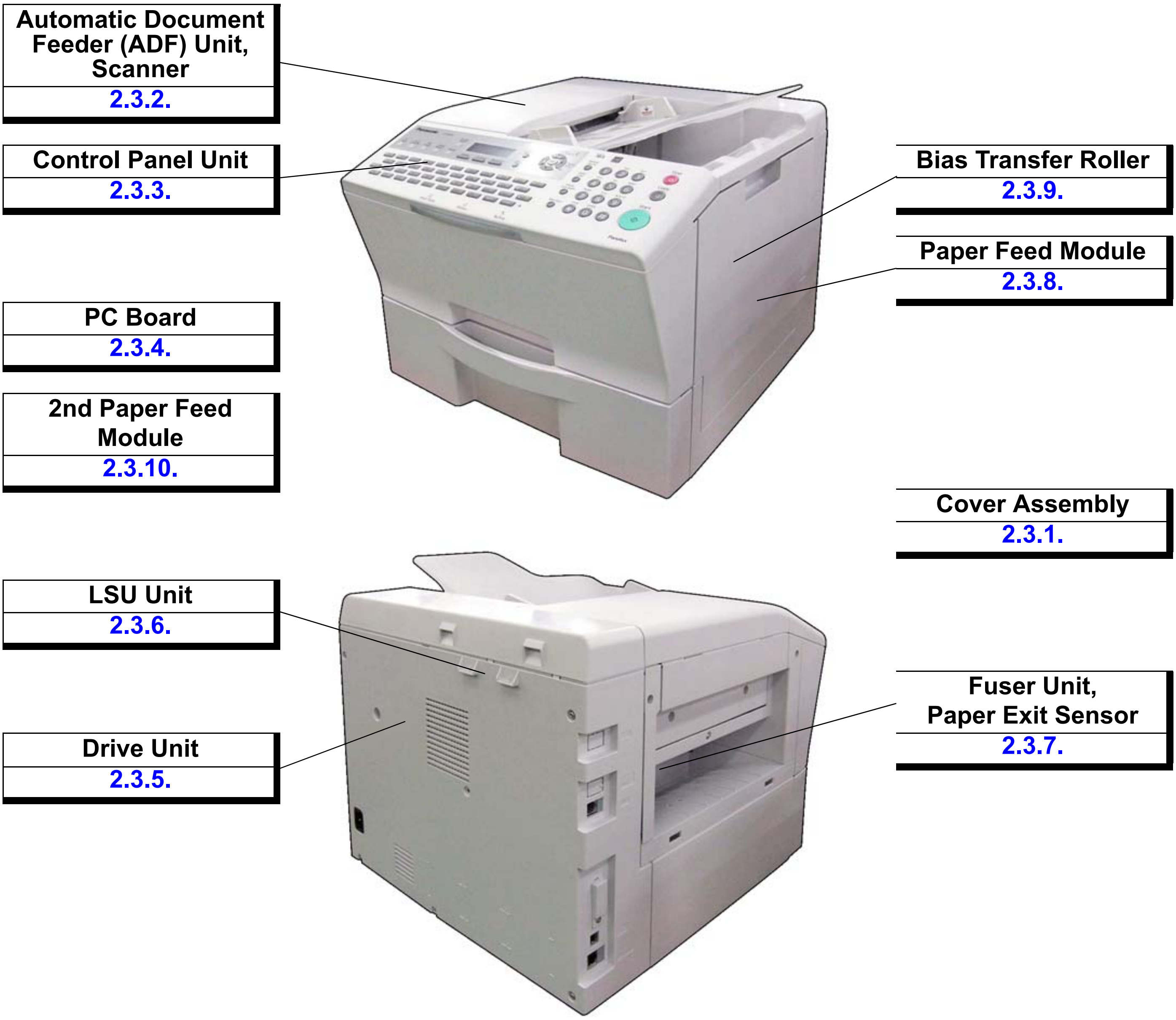

Front Cover
2.3.1
Drive Unit
2.3.5
SC PCB
2.3.4
MJR PCB
2.3.4
SPC PCB
2.3.4
LVPS
2.3.4
HVPS
2.3.4
Top Cover
2.3.1
LSU Unit
2.3.6
Control Panel Unit
2.3.1
Control Panel Unit
2.3.3
EXT Cover
2.3.1
Fuser Unit
2.3.7
Paper Exit Sensor
2.3.7
Right Cover
2.3.1
Paper Feed Module
2.3.7
Rear Cover
2.3.1
Bias Transfer Roller
2.3.9
ADF Unit
2.3.2
Stamp Unit
2.3.2
Roller Assembly
2.3.2

2.2. General Disassembly

Pertinent Disassembly Instruction sections are shown below.

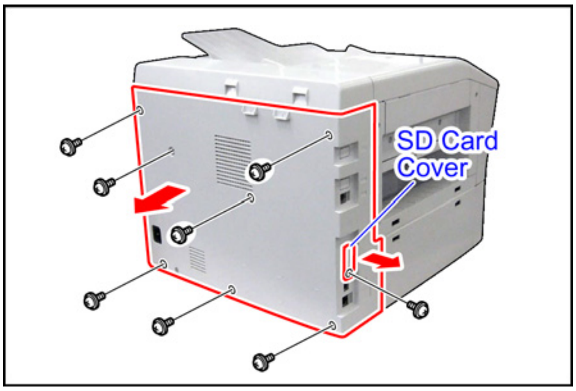
Caution:

Reassembly is done in reverse order. Follow the instructions carefully, making sure that all parts are properly installed to comply with EMI regulations and safety precautions.


Automatic Document Feeder (ADF) Unit, Scanner
2.3.2.
Control Panel Unit
2.3.3.
PC Board
2.3.4.
2nd Paper Feed Module
2.3.10.
LSU Unit
2.3.6.
Drive Unit
2.3.5.
Bias Transfer Roller
2.3.9.
Paper Feed Module
2.3.8.
Cover Assembly
2.3.1.
Fuser Unit, Paper Exit Sensor
2.3.7.

2.3. Disassembly Instructions

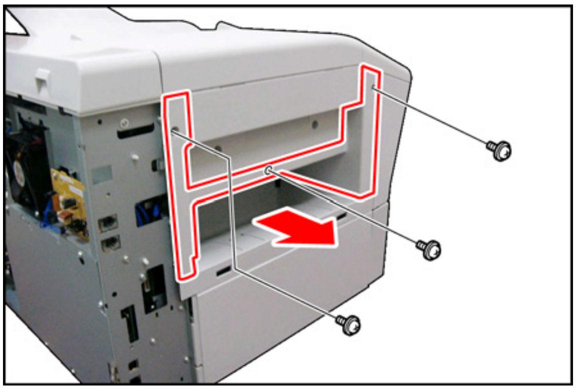
2.3.1. Cover Assembly



[1. Rear Cover]

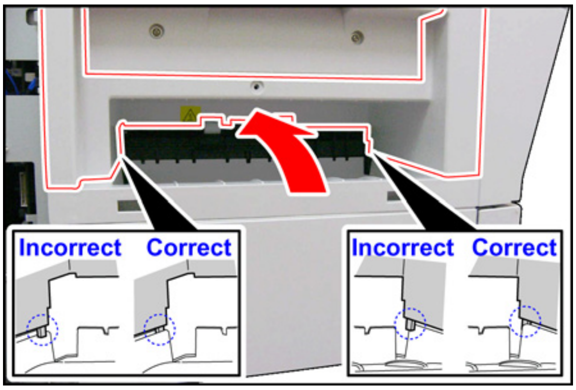
(1) Remove 1 **Screw**, and the **SD Card Cover** (605).
(2) Remove 7 **Screws**.
(3) Remove the **Rear Cover** (604).

Caution:
Remove the SD Memory Card if it was installed.

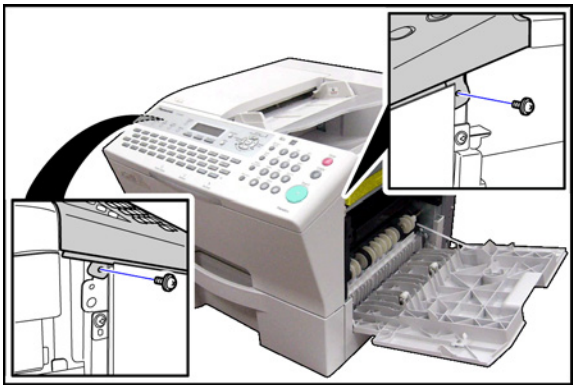


[2. Exit Cover]

(1) Remove the **Rear Cover** (604).
(Refer to 2.3.1. [1.Rear Cover])
(2) Remove 3 **Screws**.
(3) Remove the **Exit Cover** (602).

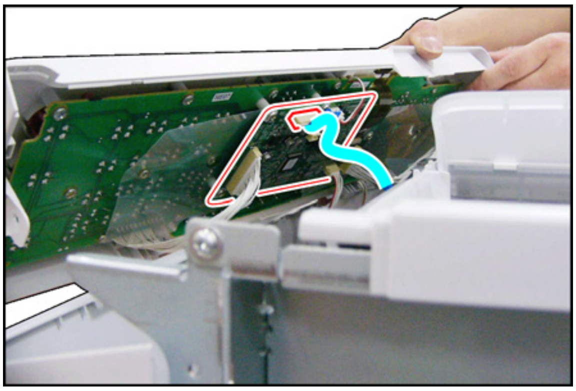


Caution:
When reinstalling the Exit Cover, make sure 2 Latches are fitted inside of the Inner Cover.

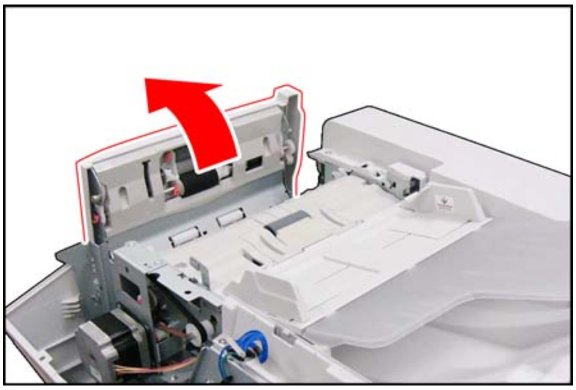


[3. Control Panel Unit]

(1) Remove the **Rear Cover** (604).
(Refer to 2.3.1. [1.Rear Cover])
(2) Remove the **Exit Cover** (602).
(Refer to 2.3.1. [2.Exit Cover])
(3) Open the **Right Cover** (614).
(4) Remove 2 **Screws**.
(5) Remove the **Control Panel Unit**.

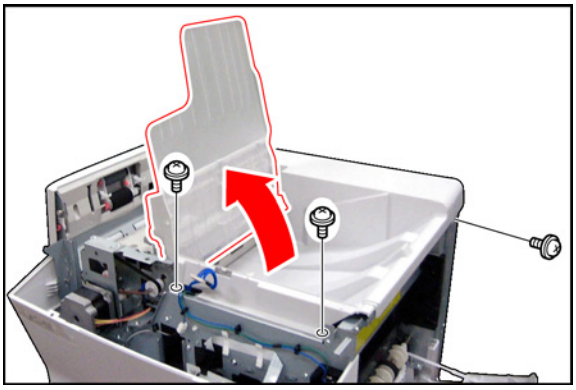


(6) Disconnect the **Harness** on the PNL1 PC Board (CN230).

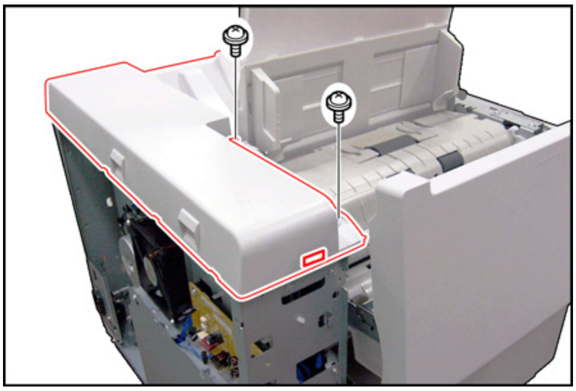


[4. Top Cover]

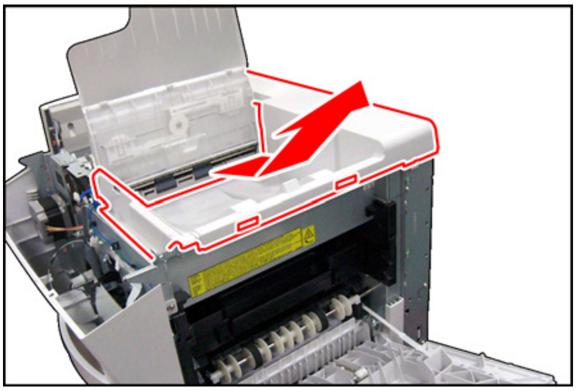
(1) Remove the **Rear Cover** (604).
(Refer to 2.3.1. [1.Rear Cover])
(2) Remove the **Exit Cover** (602).
(Refer to 2.3.1. [2.Exit Cover])
(3) Remove the **Control Panel Unit**.
(Refer to 2.3.1. [3.Control Panel Unit])
(4) Open the **ADF Cover Assembly**.



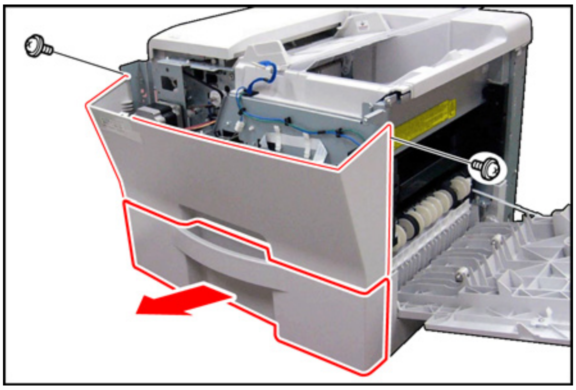
(5) Remove 3 **Screws**.
(6) Lift the **ADF Tray Assembly**.



(7) Remove 2 **Screws**.
(8) Release the **Latch Hook** on the **Top Cover** (601).

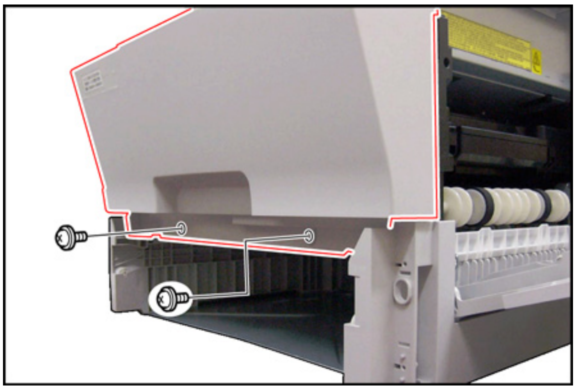


(9) Release 2 **Latch Hooks** and remove the **Top Cover** (601).

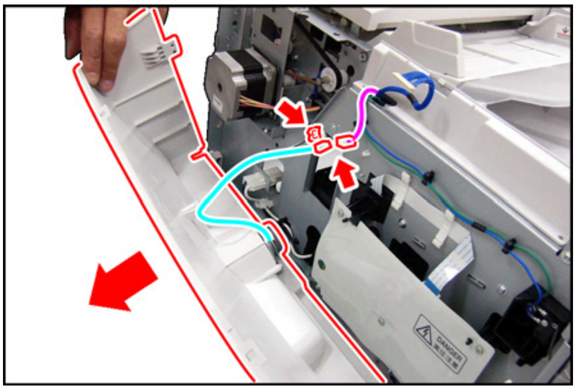


[5. Front Cover Assembly]

(1) Remove the **Rear Cover** (604).
(Refer to 2.3.1. [1.Rear Cover])
(2) Remove the **Exit Cover** (602).
(Refer to 2.3.1. [2.Exit Cover])
(3) Remove the **Control Panel Unit**.
(Refer to 2.3.1. [3.Control Panel Unit])
(4) Remove the **Top Cover** (601).
(Refer to 2.3.1. [4.Top Cover])
(5) Pull the **Paper Tray** out.
(6) Remove 2 **Screws**.

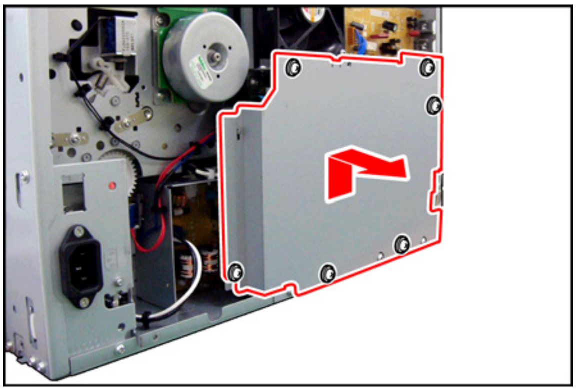


(7) Remove 2 **Screws**.

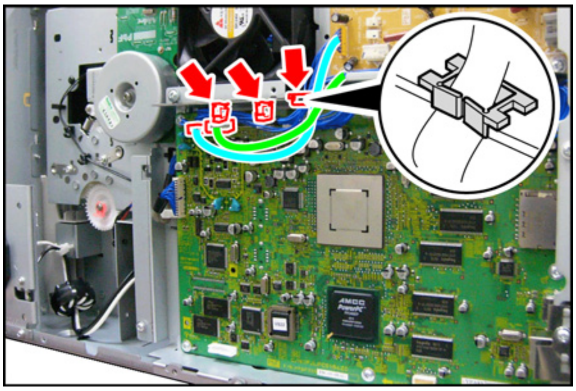


(8) Release the **Speaker Harness** from 1 Clamp.
(9) Disconnect the **Speaker Harness**.
(10) Remove the **Front Cover Assembly**.

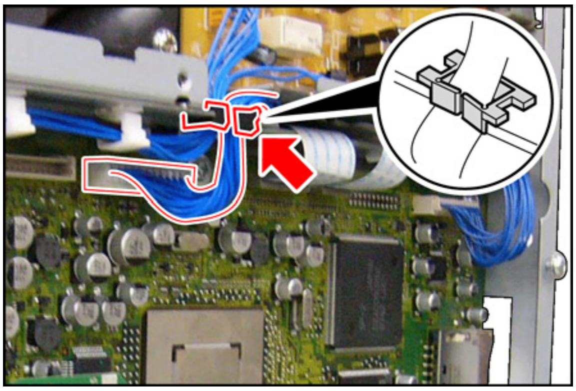
[6. ADF Drive Assembly]



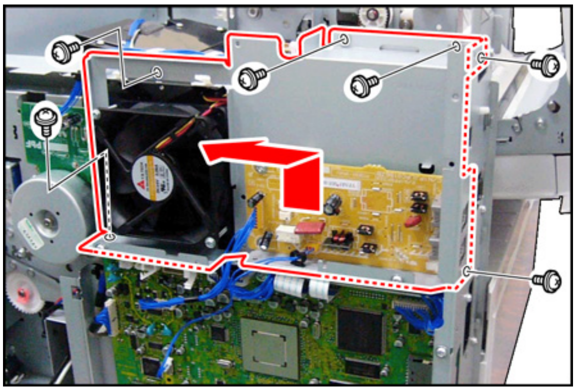
(1) Remove the **Rear Cover** (604).
(Refer to 2.3.1. [1.Rear Cover])
(2) Remove the **Exit Cover** (602).
(Refer to 2.3.1. [2.Exit Cover])
(3) Remove the **Control Panel Unit**.
(Refer to 2.3.1. [3.Control Panel Unit])
(4) Remove the **Top Cover** (601).
(Refer to 2.3.1. [4.Top Cover])
(5) Remove the **Front Cover Assembly**.
(Refer to 2.3.1. [5.Front Cover Assembly])
(6) Loosen 6 **Screws**.
(7) Remove the **SC Cover** (714).



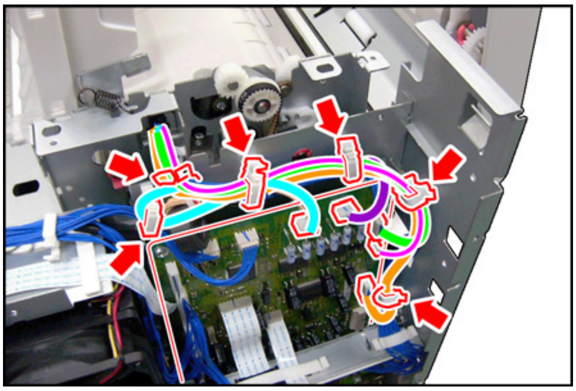
(8) Release 2 **Harnesses** from 2 Clamps and 1 Edge Saddle.
(9) Disconnect 2 **Harnesses** on the SC PC Board (CN519, CN520).



Caution:
When reconnecting the Harnesses, insert the **Power-2 Harness** into the Edge Saddle as illustrated, to comply with EMI regulations.

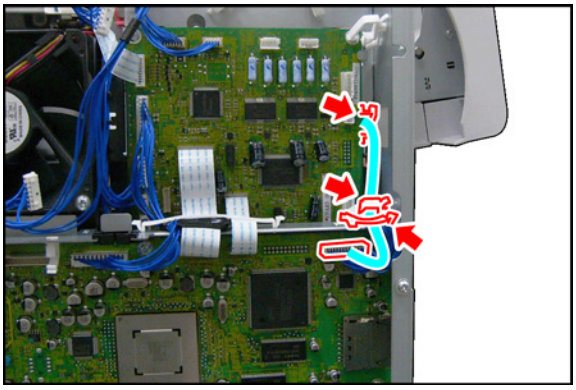


(10) Remove 6 **Screws**.
(11) Remove the **MJR PC Board Assembly**.



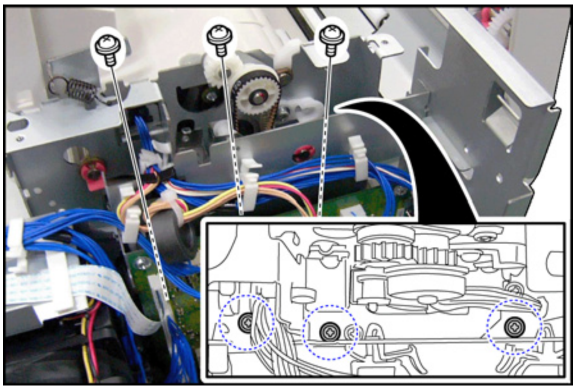
(12) Release 5 **Harnesses** from 5 Clamps and 1 Edge Saddle.

(13) Disconnect 5 **Harnesses** on the SPC PC Board (CN701, CN706, CN709, CN710 and CN714).

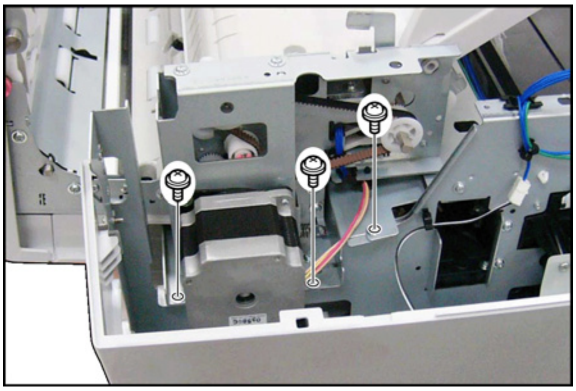


(14) Release the **Harness** from 1 Clamp, Edge Saddle and 1 Flat Clamp.

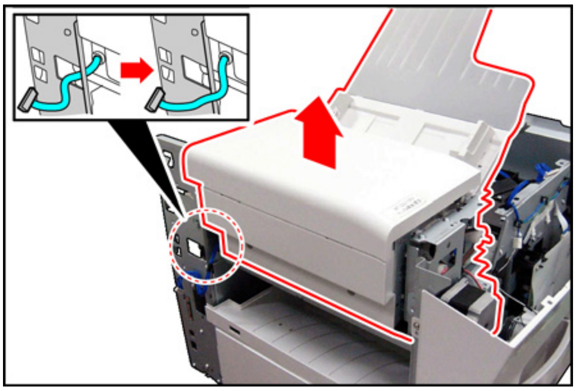
(15) Disconnect the **Harness** on the SC PC Board (CN502).



(16) Remove 3 **Screws** on the Rear Side.



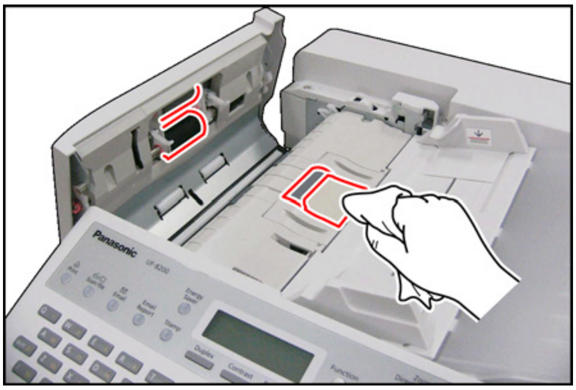
(17) Remove 3 **Screws** on the Front Side.



Caution:
To prevent damaging the Harness, carefully guide it throughout the frame.

(18) Remove the **ADF Drive Assembly**.

2.3.2. Automatic Document Feeder (ADF) Unit, Scanner



[1. Cleaning]

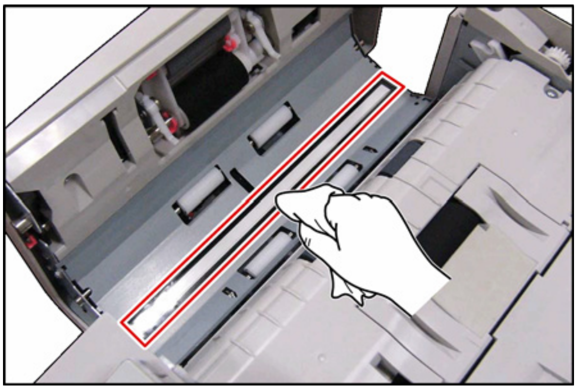
(1) Open the **ADF Cover Assembly**.
(Refer to 2.3.1. [4.Top Cover])

<Separation Roller, Pick Up Roller and Feed Roller>

Clean the surface of the Rollers with a soft cloth, saturated with water.

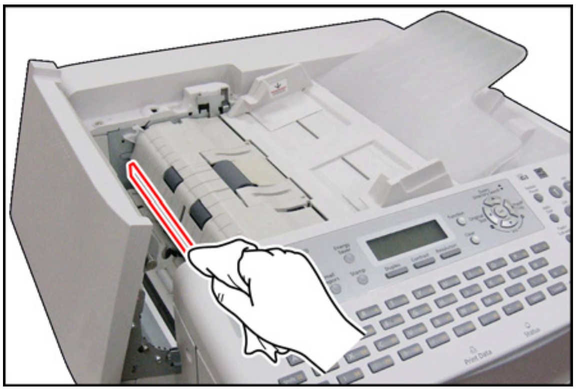
<ADF Pad>

Clean the surface of the ADF Pad only with a soft dry cloth.



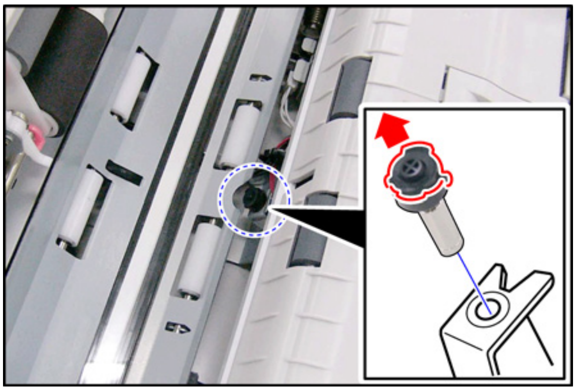
<CIS (Contact Image Sensor)>

Clean the surface of the CIS only with a soft dry cloth.



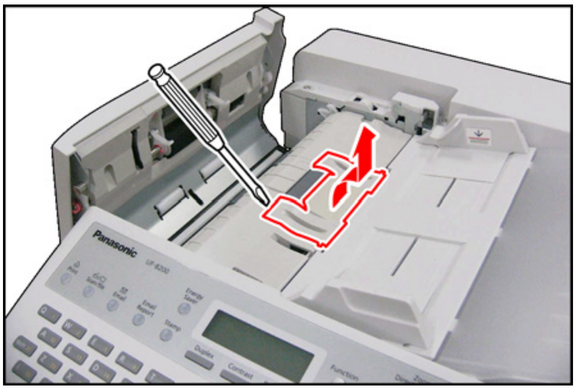
<White Sheet>

Clean the surface of the White Sheet only with a soft dry cloth.



[2. Stamp Unit]

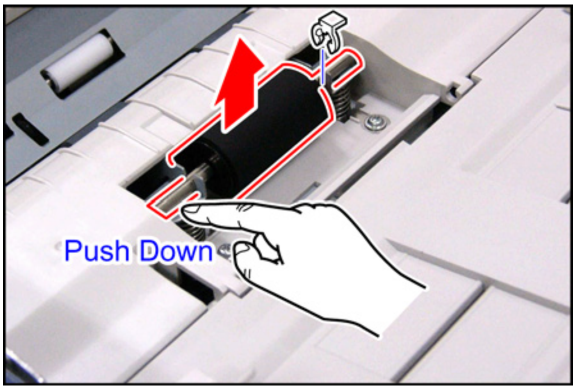
(1) Open the **ADF Cover Assembly**.
(Refer to 2.3.1. [4.Top Cover])
(2) Remove the **Stamp Unit** (422).
(3) Remove the **Stamp Head**.



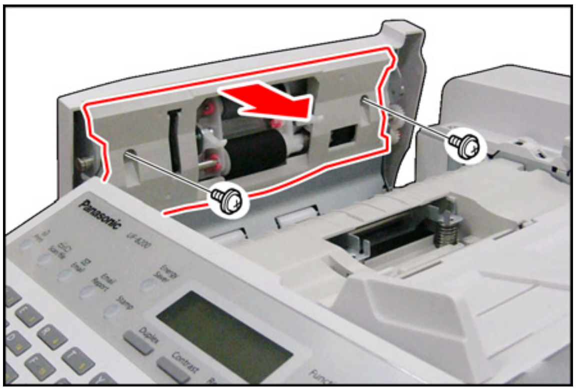
[3. Roller Assembly]

<Separation Roller Assembly>

(1) Open the **ADF Cover Assembly**.
(Refer to 2.3.1. [4.Top Cover])
(2) Remove the **Separation Roller Cover** (438) as illustrated.

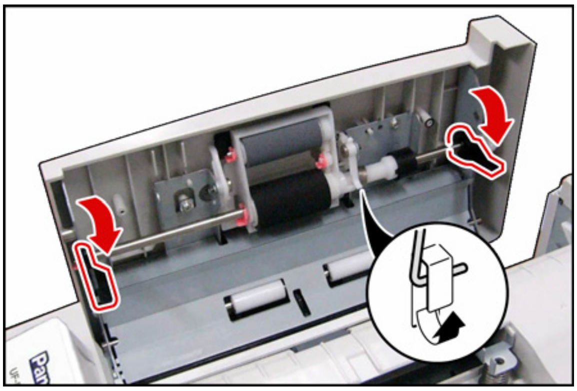


(3) Remove the **Snap Ring**.
(4) Remove the **Separation Roller Assembly** as illustrated.
(5) Remove the **Separation Roller Shaft Assembly** (440).



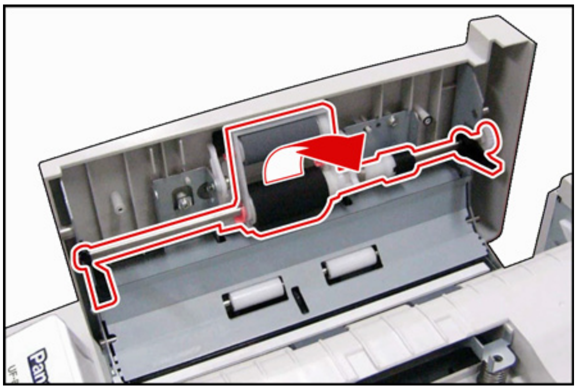
<Pick Up Roller (416)>

(6) Remove 2 **Screws**.
(7) Remove the **Upper Paper Guide** (311).

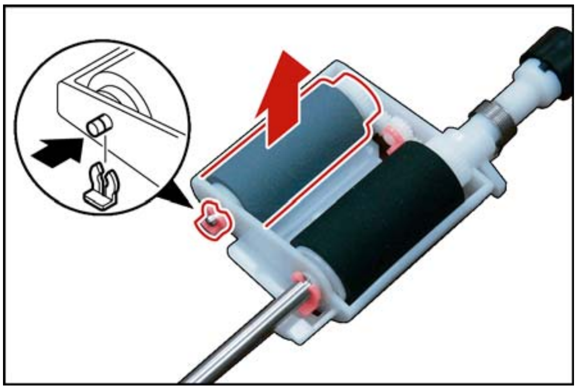


(8) Release the **Spring** from the Hook as illustrated.

(9) Remove both side **Feed Levers** (402).



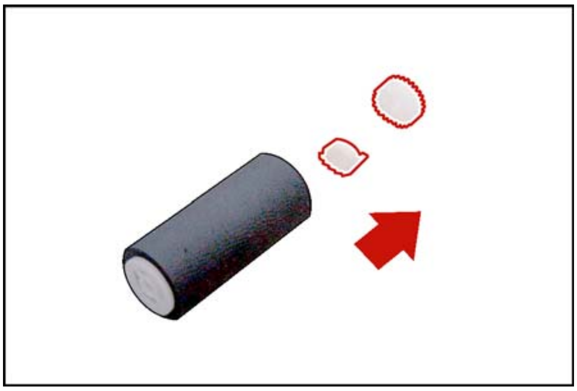
(10) Remove the **Roller Assembly**.



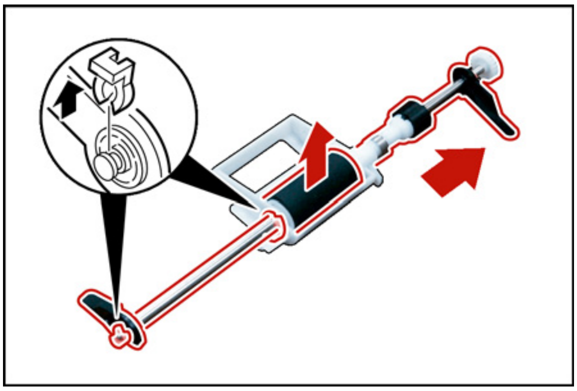
(11) Remove the **Snap Ring**.

(12) Remove the **Pick Up Shaft** (412).

(13) Remove the **Pick Up Roller Assembly.**

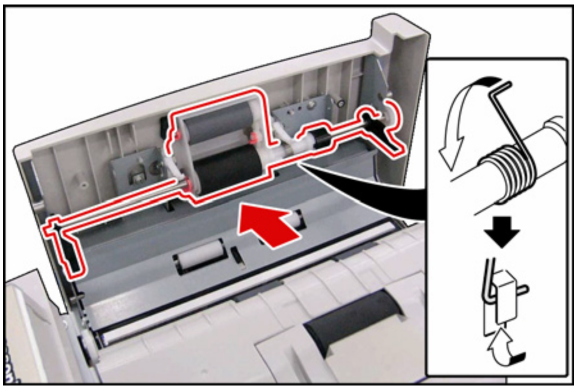


(14) Remove the **Pick Up 1 Gear** (414) and **Pick Up 2 Gear** (413).

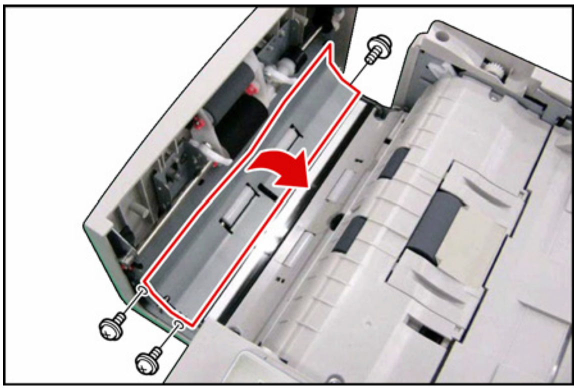


<Feed Roller>

(15) Remove the **Snap Ring**.
(16) Remove the **Feed Lever** (402).
(17) Remove the **Feed Roller Shaft Assembly**.
(18) Remove the **Feed Roller** (411).

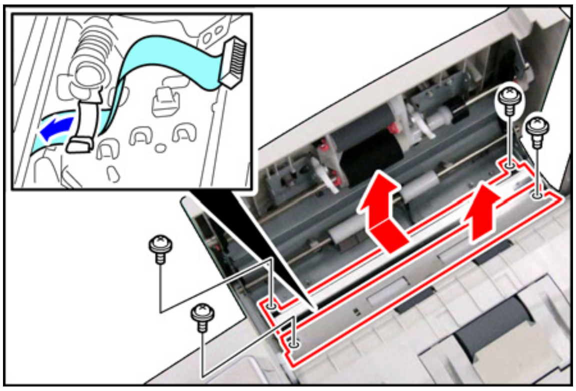


Note:
When reinstalling, make sure that the Roller Assembly is properly placed on the ADF Unit.



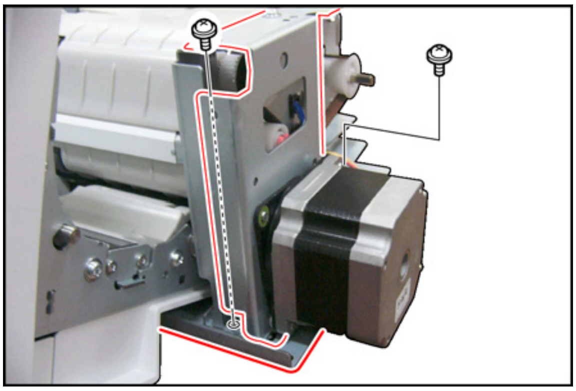
[4. CIS (Contact Image Sensor) Assembly]

(1) Open the **ADF Cover Assembly**.
(Refer to 2.3.1. [4.Top Cover])
(2) Remove the **Stamp Unit**.
(Refer to 2.3.2. [2.Stamp Unit])
(3) Remove the **Upper Paper Guide** (311).
(Refer to 2.3.2. [3.Roller Assembly])
(4) Remove 3 **Screws**.
(5) Remove the **Paper Guide** (434).



(6) Remove 2 **Screws**.
(7) Remove the **Paper Guide** (433).
(8) Remove 2 **Screws**.
(9) Remove the **CIS Assembly**.
(10) Disconnect the **Flat Harness** from CIS Assembly.

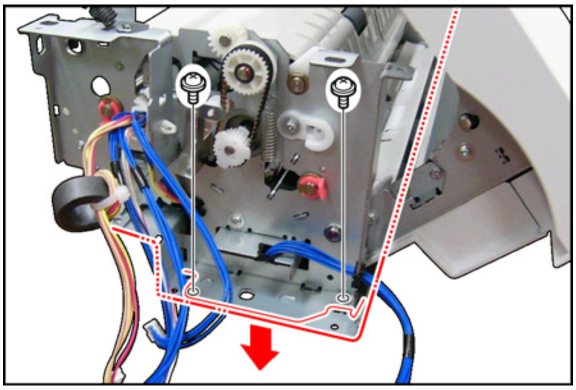
Caution:
When reinstalling the CIS Assembly, pull out the Flat Harness a little from the machine first.
After connecting, push the Flat Harness in the machine.



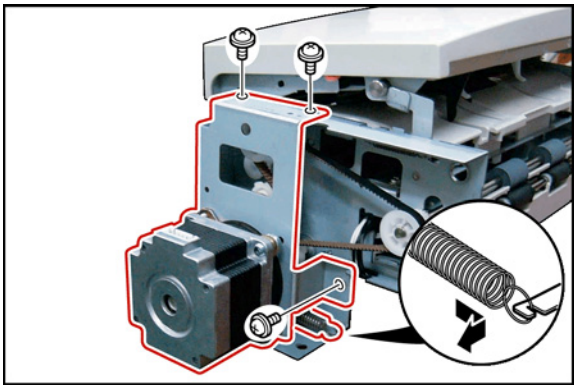
[5. Motor Assembly]

<Paper Transfer Motor Assembly>

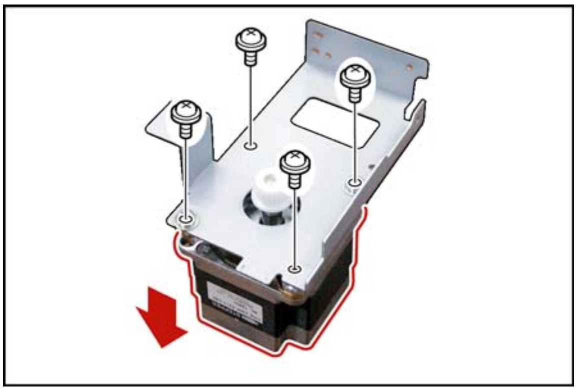
(1) Remove the **ADF Drive Assembly**.
(Refer to 2.3.1. [6.ADF Drive Assembly])
(2) Remove the **ADF Tray Assembly**.
(3) Remove 2 **Screws**.



(4) Remove 2 **Screws**.
(5) Remove the **ADF Base** (538).
(6) Close the **ADF Cover Assembly**.
(7) Turn the **ADF Drive Assembly** upside down.
(8) Release the **Paper Transfer Motor Harness** from 7 Clamps.

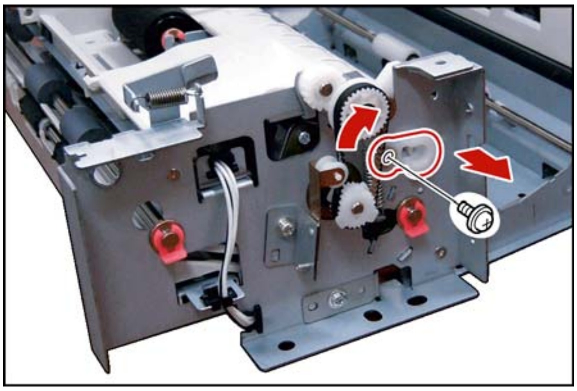


(9) Unhook the **Tension 2 Spring** (332).
(10) Remove 3 **Screws**.
(11) Remove the **Paper Transfer Motor Assembly**.



(12) Remove 4 **Screws**.
(13) Remove the **Paper Transfer Motor Assembly**.

<Paper Feed Motor>



(14) Open the **ADF Cover Assembly**.
(Refer to 2.3.1. [4.Top Cover])

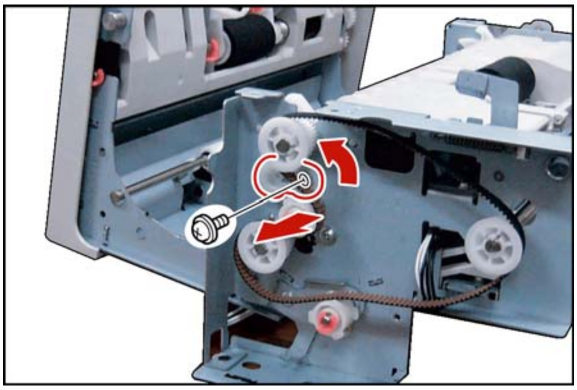
(15) Remove the **Stamp Unit** (422).
(Refer to 2.3.2. [2.Stamp Unit])

(16) Remove the **Separation Roller Cover**.
(Refer to 2.3.2. [3.Roller Assembly])

(17) Remove the **Paper Guide** (433) and **CIS Assembly**.
(Refer to 2.3.2. [4.CIS (Contact Image Sensor) Assembly])

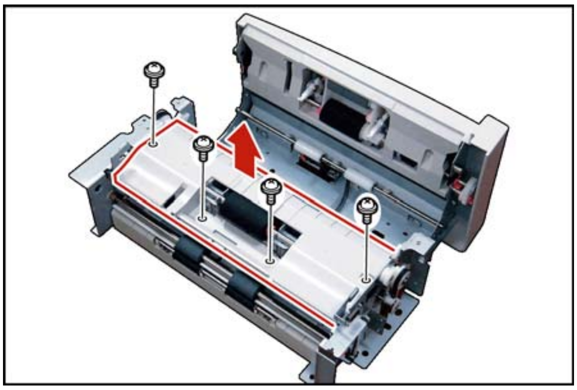
(18) Remove 1 **Screw**.

(19) Remove the **Plate Holder** (509).



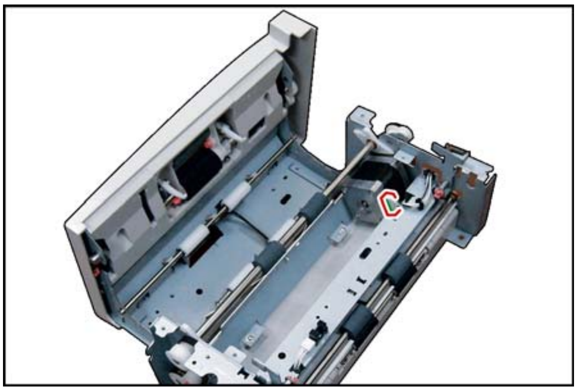
(20) Remove 1 **Screw**.

(21) Remove the **Plate Holder** (509).

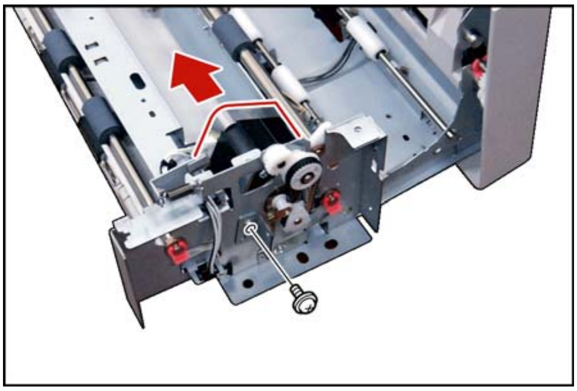


(22) Remove 4 **Screws**.

(23) Remove the **Separation Guide Plate Assembly**.

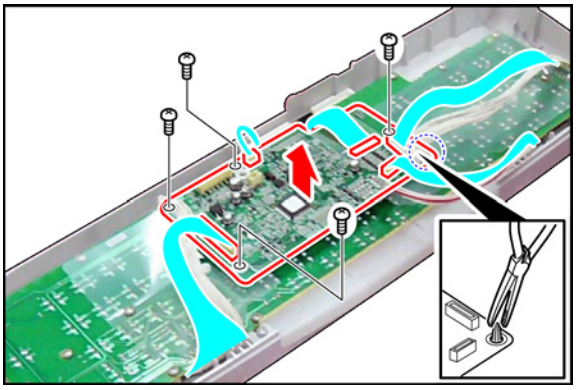


(24) Disconnect the **Harness** on the Paper Feed Motor.



(25) Remove 1 **Screw**.
(26) Remove the **ADF Motor Assembly**.

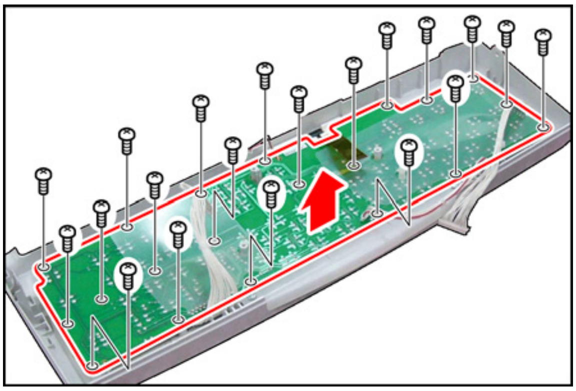
2.3.3. Control Panel Unit



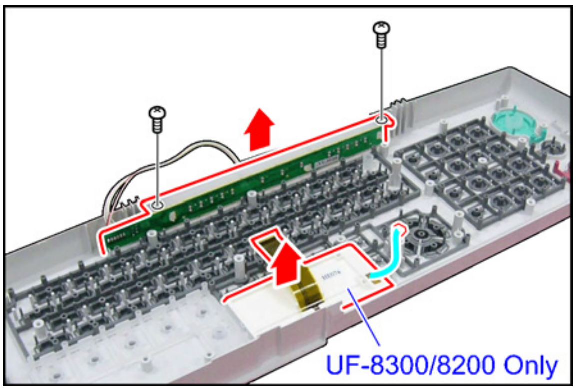
<PNL1 PC Board and PNL2 PC Board>

(1) Remove the **Control Panel Unit**.
(Refer to 2.3.1. [3.Control Panel Unit])
(2) Disconnect all the **Harnesses** on PNL1 PC Board.
(3) Remove 4 **Screws**.
(4) Remove the **PNL1 PC Board** (1804) from the Spacer.

Note:
Remove the PNL1 PC Board by nipping the spacer with a pliers as illustrated.



(5) Remove 20 **Screws**.
(6) Remove the **PNL2 PC Board** (1806).



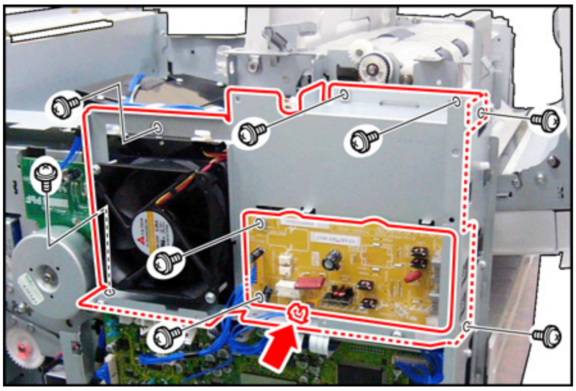
<LED Module and LCD Module>

(7) Remove 2 **Screws**.
(8) Remove the **LED Module**.
(9) Remove the **PNL3 Board** (1805) from the Lamp Cover.

UF-8300/8200 Only

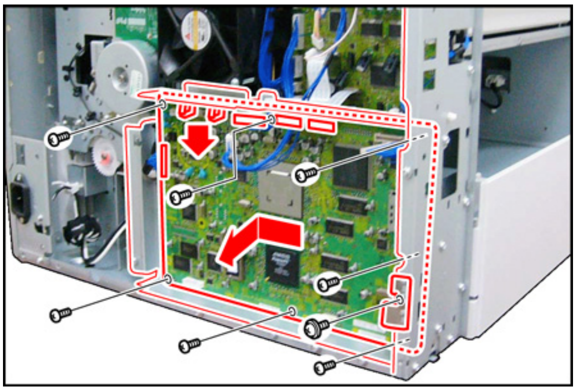
(10) Remove the **LCD Module** (111).

2.3.4. PC Board



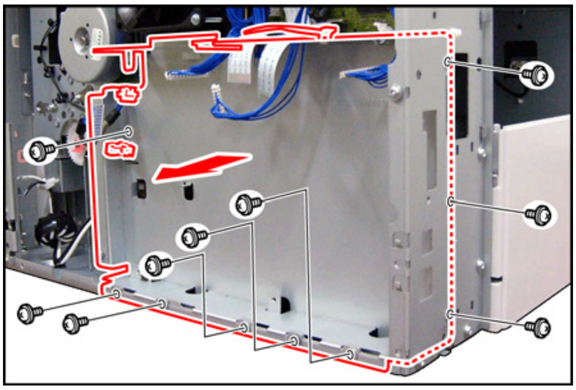
<MJR PC Board>

(1) Remove the **Rear Cover** (604).
(Refer to 2.3.1. [1.Rear Cover])
(2) Remove the **SC Cover** (714).
(Refer to 2.3.1. [6.ADF Drive Assembly])
(3) Release all **Harnesses** from 1 Clamp and 1 Egde Saddle on the MJR Bracket.
(4) Remove 2 **Screws**.
(5) Remove the **MJR PC Board** (1702).
(6) Remove 6 **Screws**.
(7) Remove the **MJR Bracket** (715).
(Refer to 2.3.1. [6.ADF Drive Assembly])

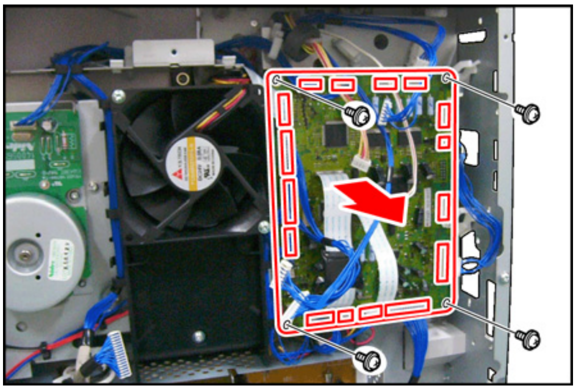


<SC PC Board>

(8) Remove 1 **Screw**.
(9) Remove the **Ground Plate** (713).
(10) Disconnect all **Harnesses** on the SC PC Board.
(11) Remove 2 **Clamps** from the SC Bracket.
(12) Remove 8 **Screws**.
(13) Remove the **SC PC Board** (1701).

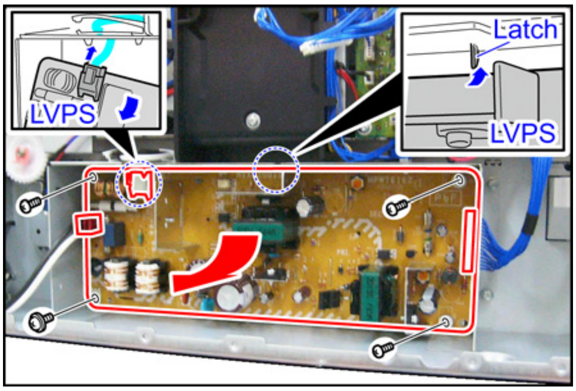


(14) Release all **Harnesses** from all Clamps and Egde Saddles on the SC Bracket.
(15) Remove 8 **Screws**.
(16) Remove the **SC Bracket** (708).



<SPC PC Board>

(17) Disconnect all **Harnesses** on the SPC PC Board.
(18) Remove 4 **Screws**.
(19) Remove the **SPC PC Board** (1704).



<LVPS>

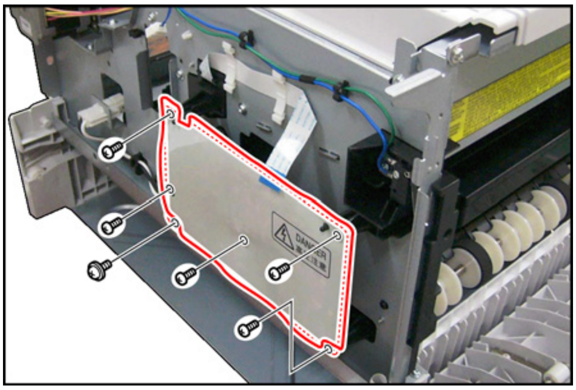
(20) Disconnect 2 **Harnesses** on the LVPS (CN103, CN102).

(21) Remove 4 **Screws**.

(22) Disconnect the **Harnesses** on the LVPS (CN101) as illustrated.

Caution:
When reinstalling the LVPS, hook the top edge to the Latch, and secure with 2 Screws.

(23) Remove the **LVPS** (1706).

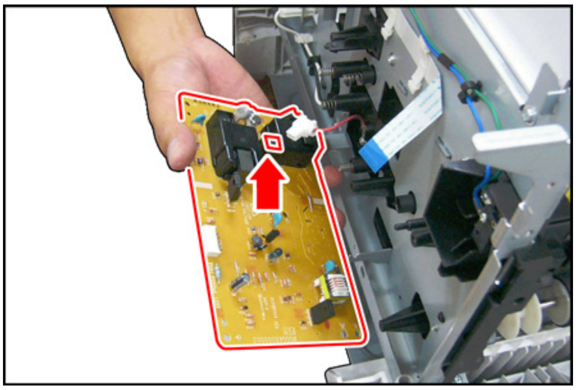


<HVPS>

(24) Remove the **Front Cover Assembly**.
(Refer to 2.3.1. [5.Front Cover Assembly])

(25) Remove 6 **Screws**.

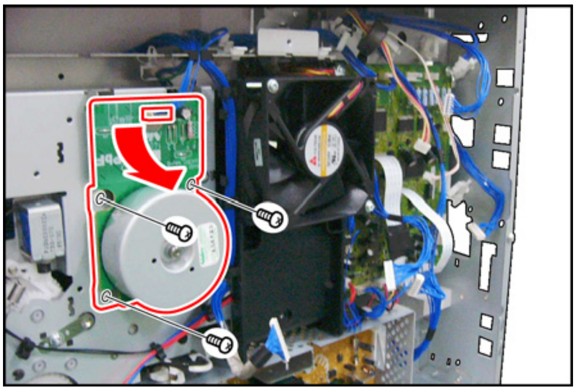
(26) Remove the **HVPS Insulation Sheet** (816).



(27) Remove the **HVPS** (817).

(28) Disconnect the **Harness** on the HVPS.

2.3.5. Drive Unit



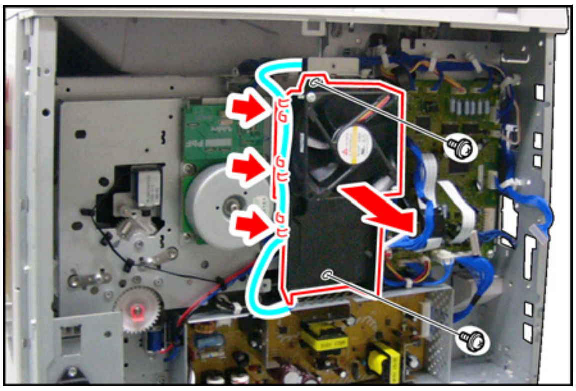
[1. Motor]

(1) Remove the **Rear Cover** (604).
(Refer to 2.3.1. [1.Rear Cover])

(2) Disconnect the **Harness** on the **Motor Assembly**.

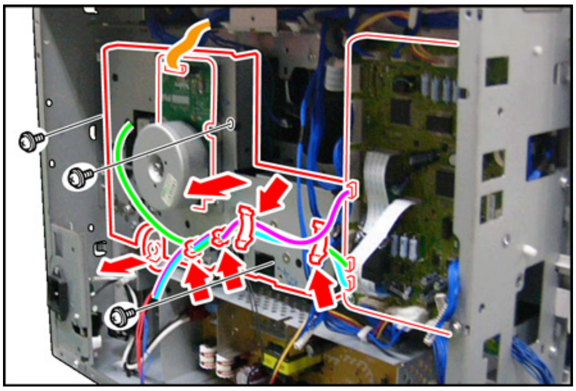
(3) Remove 3 **Screws**.

(4) Remove the **Motor** (1201).

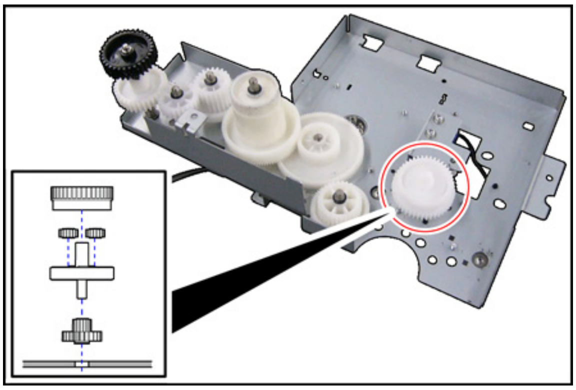


[2. Drive Unit]

(1) Remove the **Rear Cover** (604).
(Refer to 2.3.1. [1.Rear Cover])
(2) Remove the **SC Cover** (714).
(Refer to 2.3.1. [6.ADF Drive Assembly])
(3) Remove the **MJR Bracket Assembly**.
(Refer to 2.3.1. [6.ADF Drive Assembly])
(4) Remove the **SC Bracket Assembly**. (Refer to 2.3.4.)
(5) Release the **Harnesses** from 6 **Latches**.
(6) Remove 2 **Screws**.
(7) Remove the **Fan Assembly**.



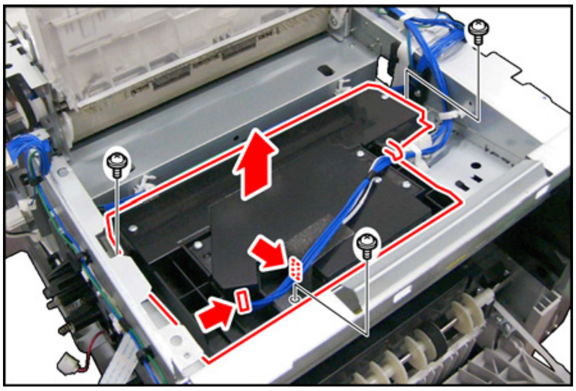
(8) Remove the **Snap Ring**.
(9) Remove the **Pick Up Roller Clutch** (921).
(10) Release 3 **Harnesses** from 4 Clamps.
(11) Disconnect 3 **Harnesses** on the **SPC PC Board**
(CN731, CN732, CN741).
(12) Disconnect the **Harness** on the **Motor Assembly**.
(13) Remove 3 **Screws**.
(14) Remove the **Drive Unit**.



Caution:

1. When removing the Drive Unit, exercise care not to drop / lose the Gears.
2. When reinstalling, please make sure the Gears are positioned properly as illustrated.

2.3.6. LSU Unit



(1) Remove the **Top Cover** (601).
(Refer to 2.3.1. [4.Top Cover])
(2) Disconnect 2 **Harnesses**.
(3) Remove 3 **Screws**.
(4) Remove the **LSU Unit** (803).

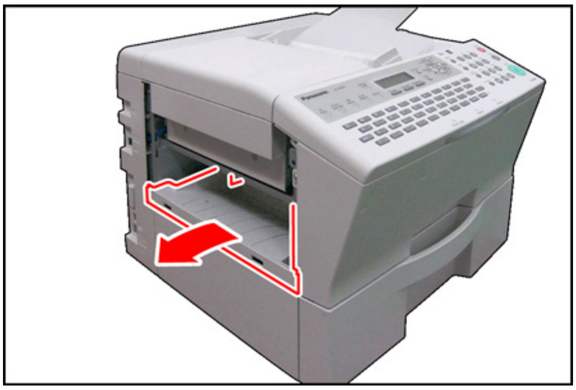
2.3.7. Fuser Unit, Paper Exit Sensor

CAUTION:

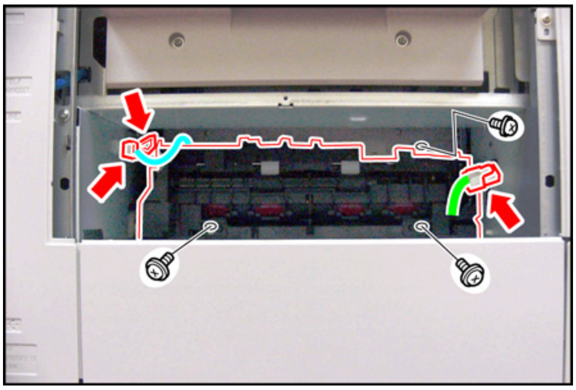
To prevent from getting burned, do not install, remove, clean or make adjustments when the Fuser Unit is hot.

[1. Fuser Unit]

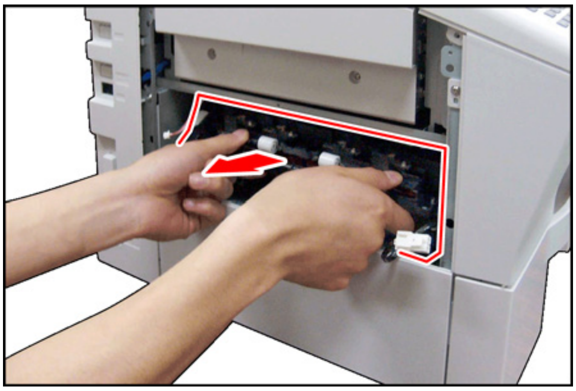
(1) Remove the **Exit Cover** (602).
(Refer to 2.3.1. [2.Exit Cover])
(2) Remove the **Inner Cover** (606).



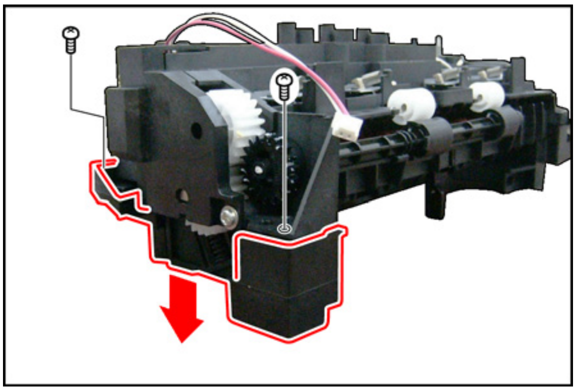
(3) Release the **Harness** from 1 Clamp.
(4) Disconnect 2 **Harnesses**.
(5) Remove 3 **Screws**.

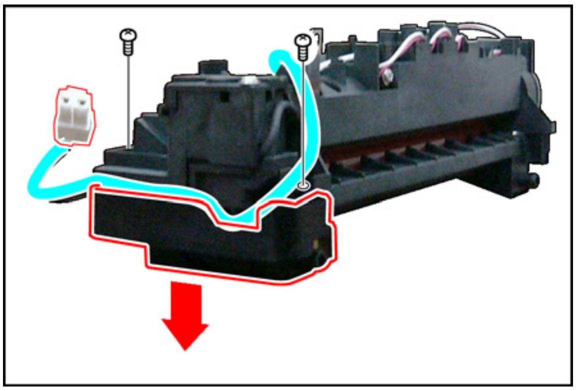


(6) Remove the **Fuser Unit** (1334).

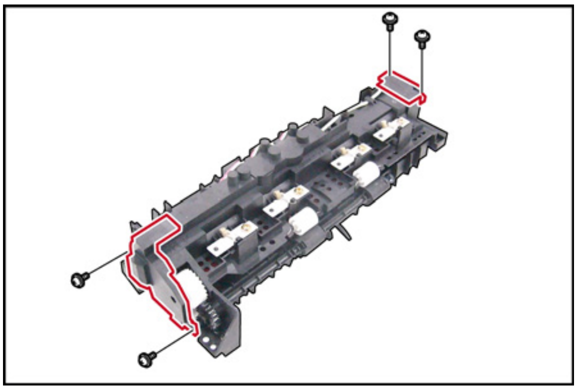


(7) Remove 2 **Screws**.
(8) Remove the **Fuser Holder R** (1330).

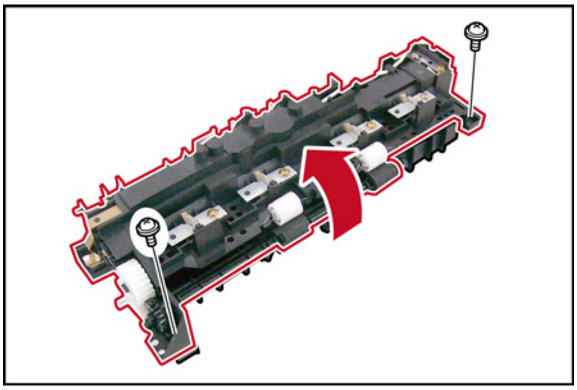




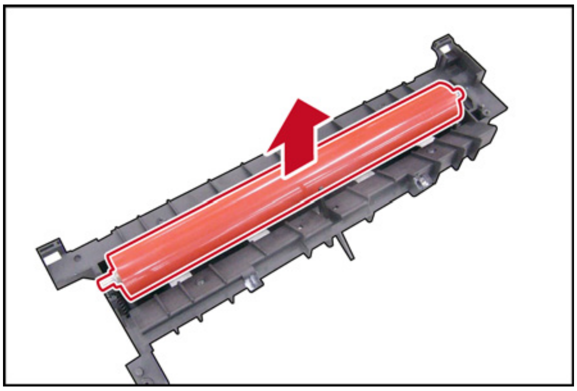
(9) Release the **Harness** from the Fuser Unit.
(10) Remove 2 **Screws**.
(11) Remove the **Fuser Holder L** (1331).



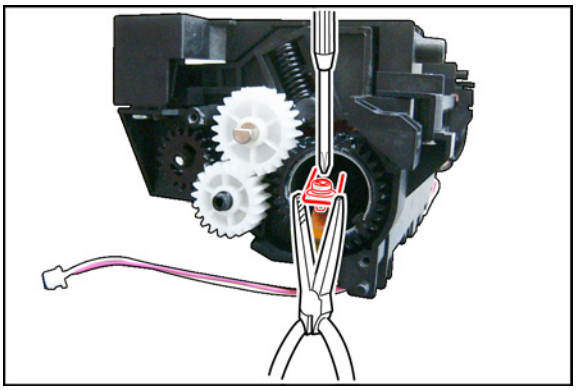
(12) Remove 2 **Screws**.
(13) Remove the **Side Fuser Cover** (1306).
(14) Remove 2 **Screws**.
(15) Remove the **Left Fuser Cover** (1316).



(16) Remove 2 **Black Screws**.
(17) Separate the **Upper Fuser Unit**.



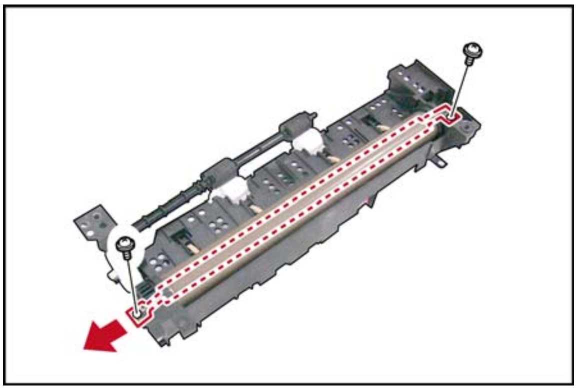
(18) Remove the **Pressure Roller** (1326).

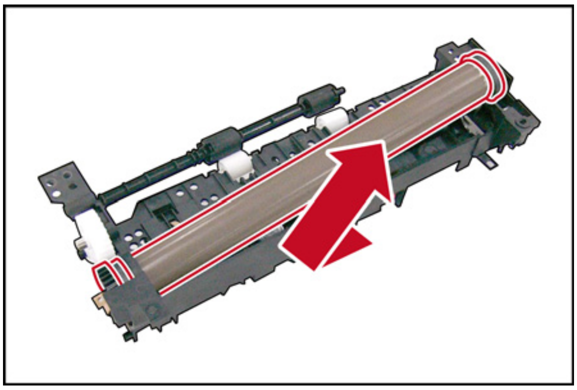


Caution:
When removing the fixing Screw, fix the LEAD Plate with a pliers as illustrated, not break the Fuser Lamp Terminal.

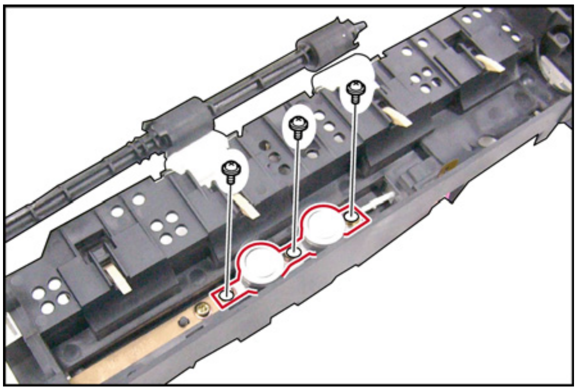
(19) Remove 2 **Screws**.
(20) Remove the **Halogen Lamp** (1319).

Note:
Do not Touch the glass portion of the Fuser Lamp with bare hands. Grease from finger prints will shorten its life cycle, use isopropyl alcohol to clean finger prints.

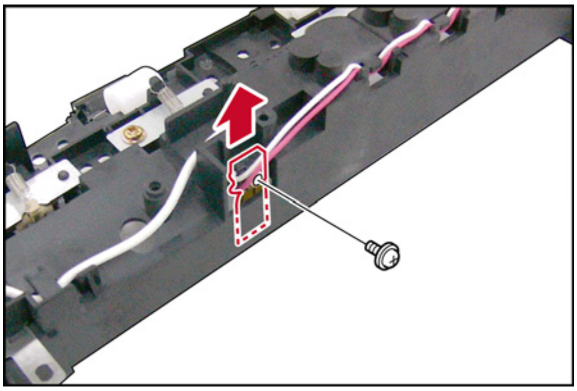




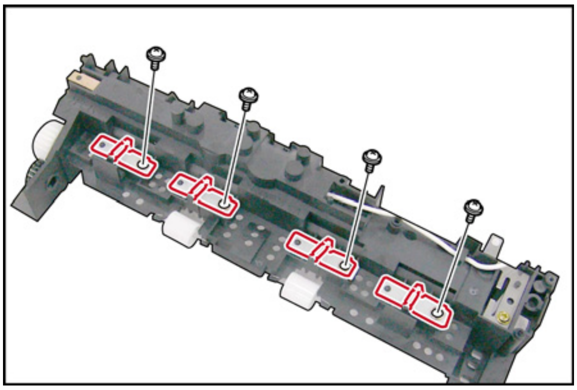
(21) Shift the **Fuser Roller** and remove the **Left Heat Roller Bushing** (1323).
(22) Remove the **Heat Roller** (1322).
(23) Remove the **Heat Roller Gear** (1320) and the **Right Heat Roller Bushing** (1321).



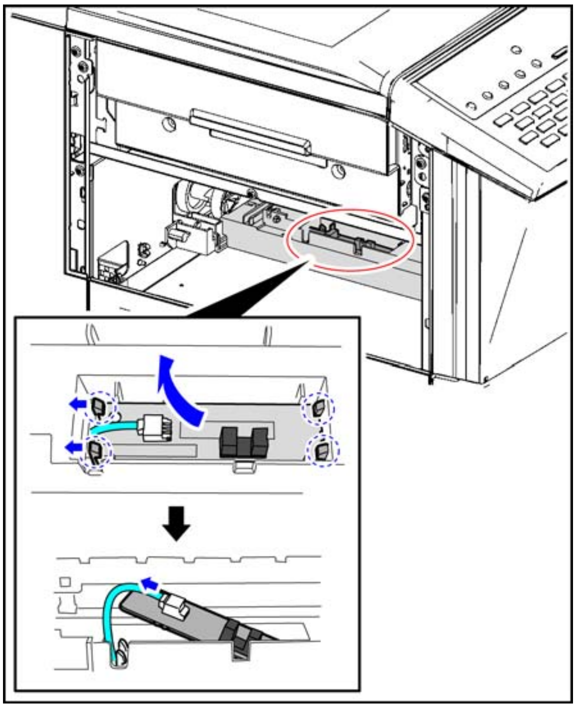
(24) Remove 3 **Screws**.
(25) Remove 2 **Thermostats** (1303).



(26) Remove 1 **Screw**.
(27) Remove the **Thermistor** (1314).



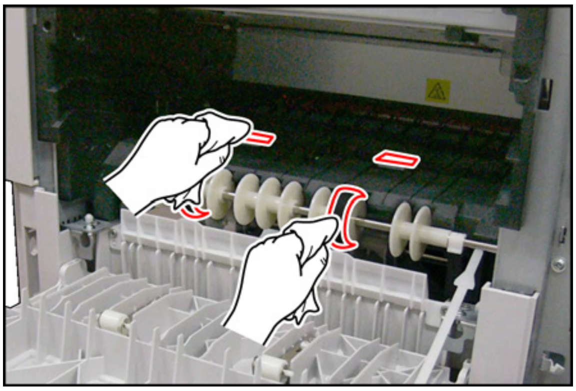
(28) Remove 4 **Separator Springs** (1311).
(29) Remove 4 **Screws**.
(30) Remove 4 **Separator Plates** (1312).
(31) Remove 4 **Separators** (1313).



[2. Paper Exit Sensor]

(1) Remove the **Exit Sensor PC Board** (1802) by unhooking 2 Latches as illustrated.
(2) Remove the **Connector** from the Exit Sensor PC Board.

2.3.8. Paper Feed Module



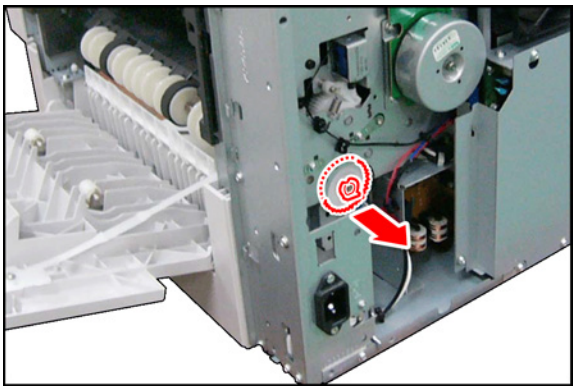
[1. Cleaning]

(1) Open the **Right Cover** (614).
(Refer to 2.3.1. [3.Control Panel Unit])
(2) Remove the **Toner Cartridge**.

<Registration Roller and Paper Feed Roller>

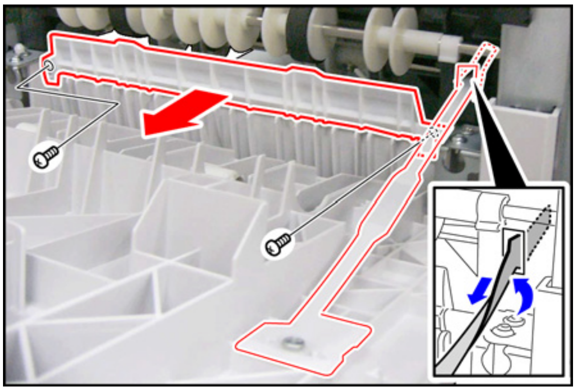
Clean the surface of the Rollers with a soft cloth, saturated with water.

Caution:
Do not bend the Plastic Sheet.

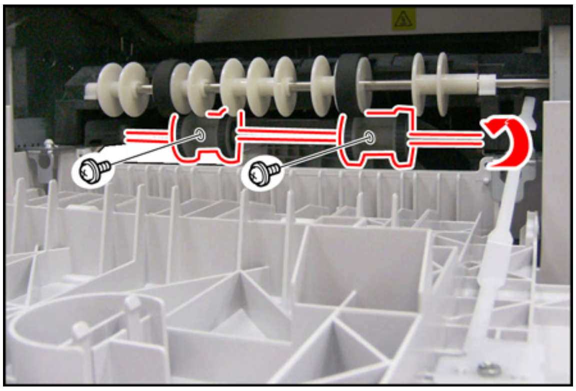


[2. Pick Up Roller]

(1) Remove the **Rear Cover** (604).
(Refer to 2.3.1. [1.Rear Cover])
(2) Open the **Right Cover** (614).
(Refer to 2.3.1. [3.Control Panel Unit])
(3) Pull the **Paper Tray** out.
(Refer to 2.3.1. [5.Front Cover Assembly])
(4) Remove the **Toner Cartridge**.
(5) Remove the **Snap Ring**.
(6) Remove the **Pick Up Roller Clutch** (921).

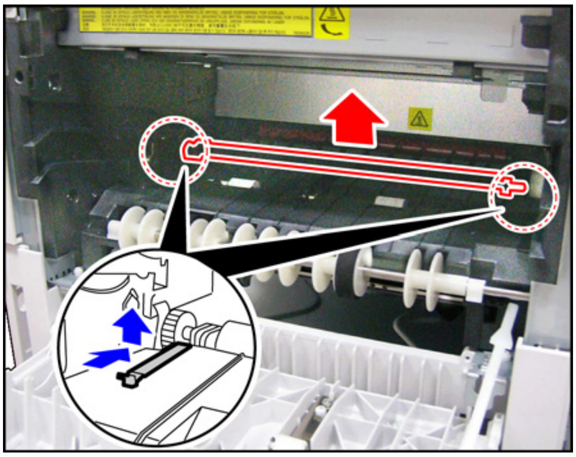


(7) Remove the **Stopper** (611) as illustrated.
(8) Remove 2 **Screws**.
(9) Remove the **Paper Guide** (1120).

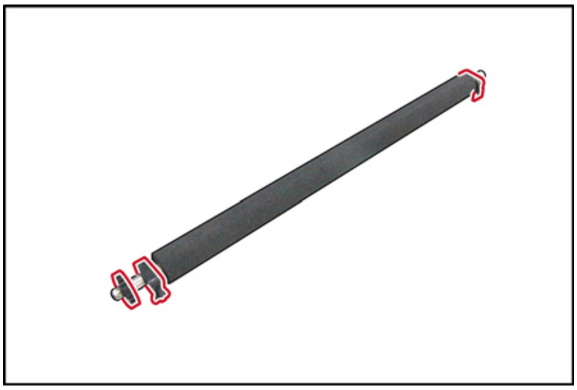


(10) Turn the **Pick Up Roller Assembly**.
(11) Remove 2 **Screws**.
(12) Remove 2 **Pick Up Rollers** (1106).

2.3.9. Bias Transfer Roller

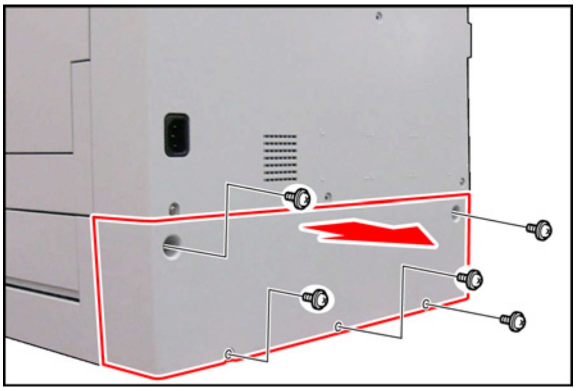


(1) Open the **Right Cover** (614).
(Refer to 2.3.1. [3.Control Panel Unit])
(2) Remove the **Toner Cartridge**.
(3) Remove 2 **Transfer Roller Holder** (901).
(4) Remove the **Bias Transfer Roller Assembly**.

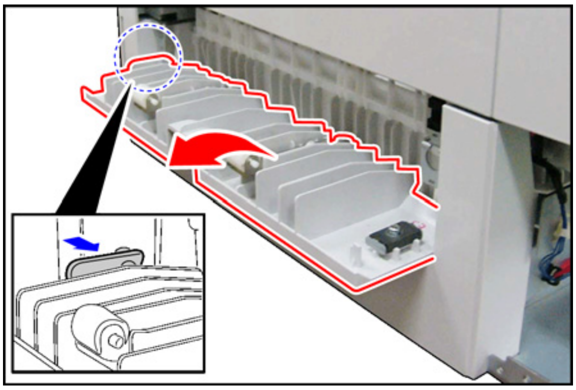


(5) Remove the **Spacer** (902).
(6) Remove the **Transfer Gear** (903).
(7) Remove 2 **Bushings** (904).
(8) Remove the **Spacer** (902).

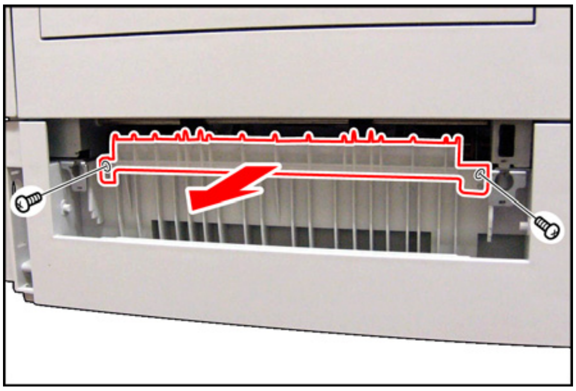
2.3.10. 2nd Paper Feed Module



(1) Remove 5 **Screws**.
(2) Remove the **Rear Cover** (1501).

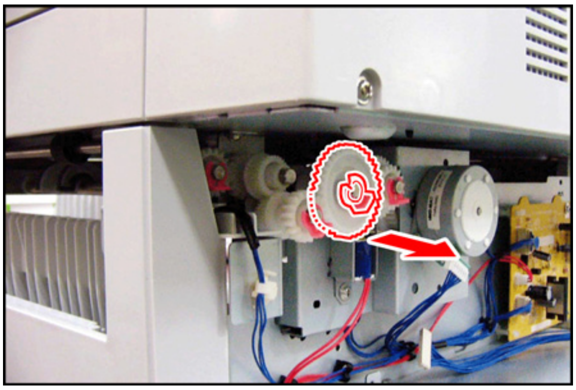


(3) Open the **Jam Cover Assembly**.
(4) Remove the **Jam Cover Assembly** by pulling the Hook as illustrated.



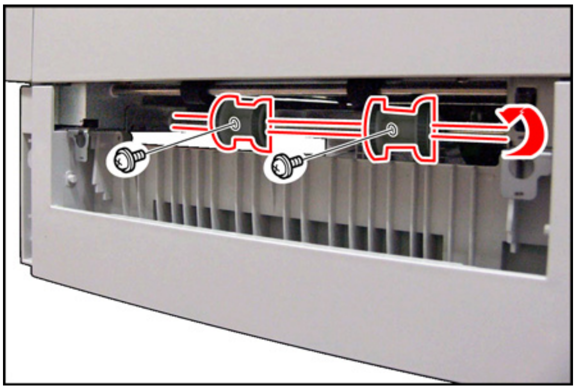
(5) Remove 2 **Screws**.

(6) Remove the **Paper Guide** (1120).



(7) Remove the **Snap Ring**.

(8) Remove the **Pick Up Roller Clutch** (1612).



(9) Turn the **Pick Up Roller Assembly**.

(10) Remove 2 **Screws**.

(11) Remove 2 **Pick Up Rollers** (1106).

3 Maintenance, Adjustments and Check Points

3.1. Preventive Maintenance

Preventive maintenance is performed at specific intervals, and consists of machine cleaning, and parts replacement. It is essential to perform these service activities properly, and at the specified intervals for customer satisfaction.
The purpose of this service is to maintain machine performance, and image quality.

1. You should prepare the replacement parts, and cleaning tools beforehand.
2. After completing the preventive maintenance, discard the used parts and packaging in accordance with local regulations, and clean the surrounding area.
3. Before servicing the equipment, turn the power switches Off, and disconnect the power cord from the wall outlet.
4. Before using solvents such as IPA (Isopropyl alcohol), wear rubber gloves and eye protection.

3.1.1. Timing

Perform the preventive maintenance in accordance with the Preventive Maintenance Check List (refer to 3.4.) in the service manual.

3.1.2. Cleaning the Rollers

1. Rollers should be cleaned with water, and a clean cloth.
2. Use the IPA (Isopropyl Alcohol) sparingly.

3.1.3. Precautions for Disassembly, and Adjustment

Caution:

Unplug the AC Power Cord before beginning installation.

1. After taking the unit apart, do not attempt to operate the machine.
2. When operating the machine with covers removed, be careful and avoid clothing from being caught by moving components.
3. While the electricity is applied to the unit, do not connect nor disconnect the connectors on any PC Board.
4. When handling the drum, follow the precautions listed in section 3.3..
5. Ensure to use correct screws.
6. Use toothed lock washers for the installation of ground wires to ensure electrical continuity.
7. To reassemble, reverse the sequence of disassembly, unless otherwise specified.
8. Blown fuses should only be replaced with fuses of the same specified rating.

3.1.4. Precautions for Handling Lasers

The optical laser system employed by this photocopier is completely sealed by a protective housing, and an external cover. Therefore, the laser beam will not stray, or leak during photocopying operation.
However, when servicing the photocopier, take the following precautions:

1. Do not insert any screwdrivers, or other tools that have high reflective properties into the path of the laser.
2. Before servicing the photocopier, take off any watches, rings, or other metallic objects that you may be wearing. (This is to avoid the danger of the laser entering the eye by reflecting off the metallic objects being worn.)
   Since the laser beam cannot be seen with the naked eye, please follow the above precautions for maximum safety.

3.1.5. Data Security Precautions

1. The Service Mode Password is essential for maintaining security of the machine. Service Technicians must change the factory default password to the new password and record/store it in a safe place out of the reach of others.
2. The Service Mode is used by Service Technicians to perform maintenance and/or repairs, as well as to maintain security of the machine. Service Technicians must not leave the machine in the Service Mode after servicing.
3. Service technicians are required to keep the SD Memory Card including the Firmware in a confidential and safe place. Make sure to remove the SD Memory Card from the machine, if it was used for updating the Firmware, etc.
4. When servicing the machine, ask customer's permission to back up data for the following reasons:

   a. Deleting the customer information during service.
   b. Keep the customer information for service.
   c. The risk of losing the data during service.

   Before servicing, back up the machine's data to prevent losing the settings.

   a. Back up the setting data onto an SD Memory Card using the Service Mode **“F9-11: Param Backup to SD”**.
   b. Back up the setting data onto a PC via a Network using **“Network Configuration Editor”**.
   c. Print out the Service Parameters / Customer information.

5. Service Technicians are required to keep the PC data/the SD Memory Card including the machine and the customer's information in a confidential and safe place. Delete the customer's data from the SD Memory Card or from the PC to maintain security of the machine.
6. When disposing/transferring this machine, delete all of the customer's information.

   a. Delete the data in the F-ROM using Service Mode **“F9-06: Shipment Set”**.
   b. Delete the data in the SD Memory Card on the SC PCB. Physically break the SD Memory Card or completely delete the data using a data deleting software.

7. To secure the customer's information, make sure the Fax number/E-mail address is set correctly in the Check & Call feature.
8. Service Manuals and Installation Instructions are essential for maintaining security of the machine. Service Technicians are required to bring back the Installation Instructions after installation, not leave at the customer site. Service Technicians are required to keep the Service Manuals and Installation Instructions in a confidential and safe place.
9. When the SC PCB is replaced the MAC address will be different, make sure that the new MAC address is recognized on the Network.
10. When setting the Remote Registration function, there is a slight possibility of an unauthorized third party attempt to access your machine's settings using an E-mail function through the Firewall. When using this function, we recommend configuring your network environment with a switching hub, and encryption to prevent your device from being wiretapped.
11. When moving the machine for repair, etc. there is a remote possibility that the stored data can be vulnerable to unauthorized access, or getting corrupted. Convey this to the customer and obtain their permission to Back up the data onto an SD Memory Card or a PC, and then delete it from the machine.
12. While servicing/replacing the machine, it is imperative that the customer's data is maintained in strictest confidentiality to prevent security breach.
13. Before updating the firmware, back up the machine's data to prevent losing the settings.

    a. Back up the setting data onto an SD Memory Card.
    b. Back up the setting data onto a PC via a Network using **“Network Configuration Editor”**.
    c. Print out the Service Parameters.

    After servicing, make sure the settings of the machine, and delete the backup data from the SD Memory Card or from the PC.

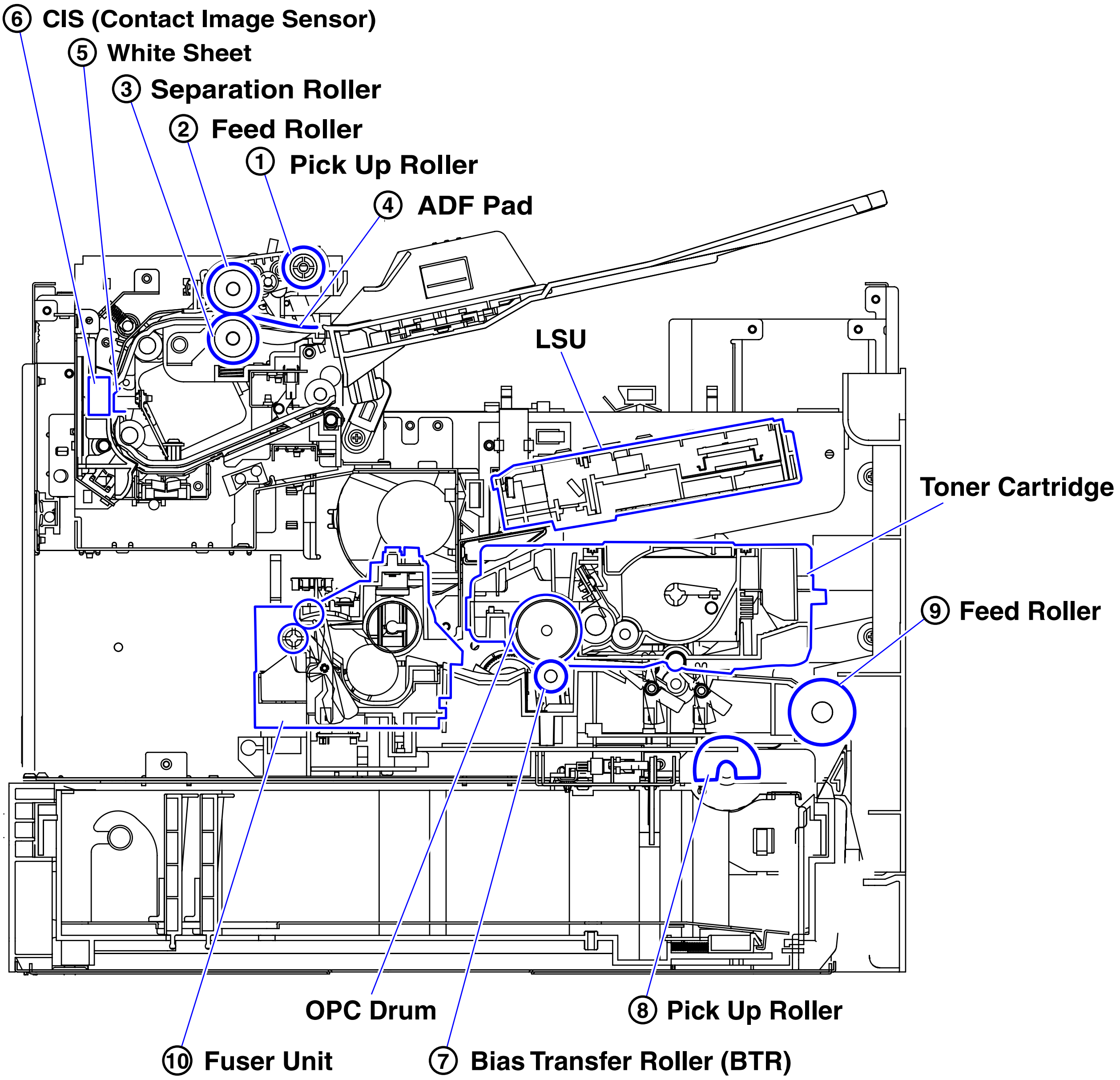
3.2. Required Tools

No.	Tools	No.	Tools
1	Soft Cloth	7	Pliers
2	Isopropyl Alcohol	8	Cotton Swab
3	Phillips Screwdriver (#2)	9	Brush
4	Stubby Phillips Screwdriver (#2)	10	KS-660 - Conductive Grease (Available from Shin-Etsu Silicones of America, Inc. URL: http://www.shinetsusilicones.com)
5	Slotted Screwdriver (3/32 in)	11	Molykote EM-50L Grease (Available from Dow Corning, URL: http://www.dowcorning.com)
6	Tweezer		

3.2.1. Preventive Maintenance Method

No.	Part Description	Important Action	Comments
1	Memory Data	Check	1. Print the RAM DATA for reference and as a precaution. 2. After completing the task(s), print and compare the RAM DATA with the previously printed one.
2	Auto Document Feeder (ADF)	Check & Clean	1. Clean the Rollers with Wet soft cloth (Water). **Note:** For stubborn toner accumulation, wipe with a soft cloth saturated with Isopropyl Alcohol first, then follow up with a soft cloth saturated with water.
3	Scanner Unit	Check & Clean	1. Clean the Scanning Glass or White Reference Sheet with Isopropyl Alcohol when required. 2. Clean it with Wet soft cloth.
4	Transmitter Unit	Check & Clean	1. Remove any foreign obstacles. 2. Clean the Rollers with Wet soft cloth (Water).
5	Inspection Items	Check	1. Check the Harnesses. 2. Check the Connectors. 3. Check the Screws. If required, replace consumable parts.
6	Gears, Rollers Shafts	Check & Grease	1. Check and grease the required Gears and Shafts.
7	Timing Belts	Check & Clean	1. Check for belt looseness or abrasion. 2. Adjust the Idle Pulley.

3.3. Preventive Maintenance Points


⑥ CIS (Contact Image Sensor)
⑤ White Sheet
③ Separation Roller
② Feed Roller
① Pick Up Roller
④ ADF Pad
LSU
Toner Cartridge
⑨ Feed Roller
OPC Drum
⑧ Pick Up Roller
⑩ Fuser Unit
⑦ Bias Transfer Roller (BTR)

3.4. Preventive Maintenance Check List

The chart outlined below is a general guideline for maintenance. The list is for an average usage of 50 transmitted and received documents per day. Needless to say, the environmental conditions and actual use will vary these factors. The chart below is for reference only.

No.	Preventive Maintenance Parts	Ref. No.	Cleaning		Replacement/Adjustment		Ref. Counter
			Cycle (Sheet)	Method	Cycle (Sheet)	Procedure	
ADF Unit							
1	Pick Up Roller	415	10K	Wet soft cloth	125K	Refer to 2.3.2.	F7-08
2	Feed Roller	411	10K	Wet soft cloth	125K		
3	Separation Roller	439	10K	Wet soft cloth	125K		
4	ADF Pad	437	10K	Dry soft cloth	-		
5	White Sheet	526	10K	Dry soft cloth	-		
6	CIS	421	10K	Dry soft cloth	-		
Paper Feed Module							
7	Bias Transfer Roller (BTR)	906	10K	Dry soft cloth	85K	Refer to 2.3.9.	F7-12
8	Pick Up Roller	1106	10K	Wet soft cloth	125K	Refer to 2.3.8.	
9	Feed Roller	914	10K	Wet soft cloth	-		
Fuser Unit							
10	Fuser Unit	1334	-	-	85K	Refer to 2.3.7.	F7-02

Note:

1. Wet Cloth represents a soft cloth saturated with water.
   For stubborn toner accumulation, wipe with a soft cloth saturated with Isopropyl Alcohol first, then follow up with a soft cloth saturated with water.
2. The Maintenance Cycle is based on the Counter Information for each individual module.
   To verify the counter information, print the Total Counter List using the Service Mode: F7 - Electronic Counter - 00 (List Print).
3. Cleaning, Replacement and Adjustment Cycle (Sheet) are based on using Panasonic's recommended standard paper and supplies. These cycles may vary with the kind of paper used, Paper size, orientation, print duty, continuous/interval print and/or ambient conditions.

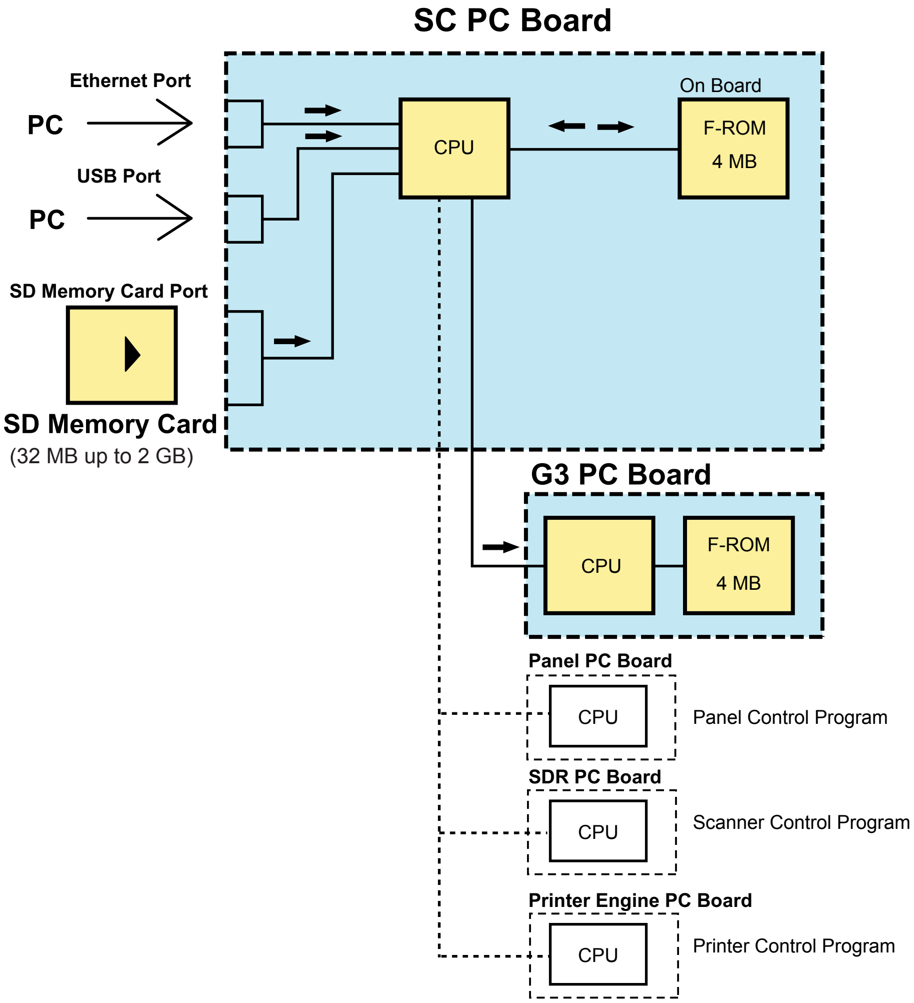
3.5. Updating the Firmware

The Quick and Easy Methods of Updating the Firmware are to use the Network Firmware Program Tool (FUP) using Ethernet LAN Port and a Crossover Cable or to use a Master SD Memory Card.

3.5.1. Firmware Configuration

A. Hardware Configuration

This machine is controlled by a Main CPU which is located on the System Control (SC) PC Board and other sub CPUs on the PCBs. The Firmware of SC PCB and G3 PCB can be updated using a PC or an SD Memory Card.


SC PC Board
Ethernet Port
PC
USB Port
PC
SD Memory Card Port
SD Memory Card
(32 MB up to 2 GB)
CPU
On Board
F-ROM
4 MB
G3 PC Board
CPU
F-ROM
4 MB
Panel PC Board
CPU
Panel Control Program
SDR PC Board
CPU
Scanner Control Program
Printer Engine PC Board
CPU
Printer Control Program

B. SC PC Board Firmware

The 4 MB Program Memory (F-ROM) is integrated on the SC PCB.

C. G3 PC Board Firmware

The 4 MB Program Memory (F-ROM) is integrated on the G3 PCB. The Programs for 2nd Super G3 communication protocol Control is saved on the Board. The Firmware is transferred as Serial Data from the SC PCB.

D. Firmware Updating Ports

Three (3) types of Ports are available for updating the firmware.

(1) Ethernet LAN Port

The machine's Firmware can be updated using a PC via Local Area Network (LAN).

(2) USB Port

The machine's Firmware can be updated using a PC via USB Port.

(3) SD Memory Card (Convenient Method without a PC)

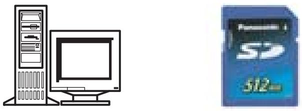
The machine's Firmware can be updated using the Master SD Memory Card. The Master SD Memory Card can be created by copying the Firmware from the Web site using the SD Memory Firmware

Writing Tool Software and a PC with SD Memory Card Slot or with an SD Memory Card Reader & Writer.

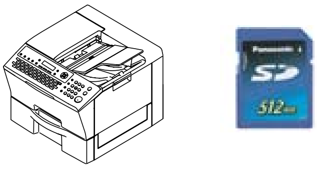
To update the SC PCB and G3 PCB, just one Master SD Memory Card (if the Card includes all necessary firmware codes) is required for the Standard or all option configurations, which includes the G3 Fax. The easiest way is to use “Auto Mode” for updating all necessary firmware at once.

Web site
- Firmware Code
- SD Memory Card Firmware Writing Tool

Download



Create the **Master SD Memory Card** using a PC



Update the Firmware using the Master SD Memory Card
(Selecting "Auto Mode" updates all necessary firmware at once.)

Note:

If the SD Memory Card will be used to update the Firmware of other machines, format the Card first with the Service Mode F9-15. Refer to 3.5.6. (Formatting the SD Memory Card).

3.5.2. Updating through a LAN Port

The firmware code can be easily updated when the main unit is connected to a LAN.
The Network Firmware Update Tool can also be used by connecting to the machine using a **crossover cable**, if the unit is not connected to a LAN.

1) **Install the Network Firmware Update Tool to your PC**
   The Tool can be downloaded from your sales company’s Web Site. Please refer to the Tool’s Operating Instructions file for additional details.

2) **Preparing the Firmware Code**
   Access the Service Web site to download the latest Firmware Code. When performing the self-extraction wizard for preparing the Firmware Code File, the Archive will be extracted automatically into the designated folder.

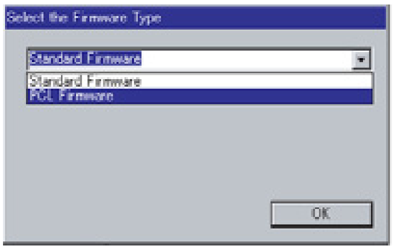
   Example:
   From:
   Firmware Code File: UF-8200_AU_xxxxxx.exe or UF-7200_AU_xxxxxx.exe
   To:
   Firmware Data Folder: C:\ Panasonic \ Panasonic-FUP \ Data

3) **Preparing the Main Unit for the Firmware Upgrade**
   Make sure the unit's Application Password is the same as the tool's password.
   Make sure the unit is in an idle state (e.g. not making copies, not printing, etc.).

4) Upgrading the Main Unit's Firmware Code

Start the Network Firmware Update Tool and select the following **Firmware Code Folders** in the **C:\Panasonic\Panasonic-FUP\Data** folder, and then follow the display instructions to upgrade the Main Unit's Firmware Codes.

Parent Firmware File Folder	Sub Firmware File Folder
\ UF-8200_AU_xxxxxx or \ UF-7200_AU_xxxxxx	\ **SC_STD** \ UF-8200**A**xVxxxxx_xx
	\ **fcb** \ UF-82_G3BAAVxxxxx_YC



When you select the Parent Folder, the following Firmware Type window appears. Proper Sub File Folders are selected automatically by selecting the Firmware Type.
The transferring order is set up automatically.

Note:

1. Manual mode must be used, when updating the designated version of the firmware or changing the type of the firmware.
   Please refer to the Section 2.2, **“Setting up the Network Firmware Update Tool, File Selection Tab”** of the Operating Instructions.
2. While updating the firmware code, the display may become garbled, however, it will return to normal upon completion of the firmware update.
3. If the firmware update fails and the unit does not boot up, the Network Firmware Update Tool will not be able to transfer the firmware code. If this occurs, please refer to the next section **“Updating through the USB Port”** and use the Local Firmware Update Tool to recover the unit.
4. The suffix "_xx" for the Folder Name or File Name may not exist depending on the destination location.

3.5.3. Updating through USB Port

If the device is not connected to the LAN, upgrade the firmware code using the USB Port.

1) Install the Local Firmware Update Tool to your PC

The Tool can be downloaded from your sales company’s Web Site. Please refer to the Tool’s Operating Instructions file for additional details.

2) Preparing the Firmware Code

Access the Service Web site to download the latest Firmware Code. When performing the self-extraction wizard for preparing the Firmware Code File, the Archive will be extracted automatically into the designated folder.

Example:
From:

Firmware Code File:	UF-8200_AU_xxxxxx.exe or UF-7200_AU_xxxxxx.exe

To:

Firmware Data Folder:	C:\ Panasonic \ Panasonic-FUP \ Data

3) Preparing the Main Unit for the Firmware Upgrade

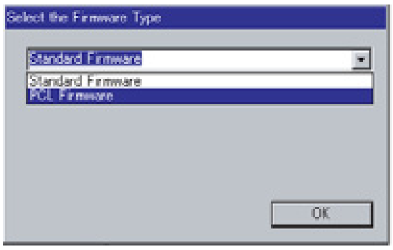
Important: DO NOT connect the USB Cable yet.
Enter into Test Mode F9-1 to enable the unit to accept the programming code from the USB Port.
Now connect the USB Cable between the Unit and PC.
Repeat the above steps if there are additional firmware code files to be updated.

4) Upgrading the Main Unit's Firmware Code

Start the Local Firmware Update Tool and select the following **Firmware Code Parent File Folder** in the **C:\Panasonic\Panasonic-FUP\Data** folder, and select the Firmware Code Type then follow the

display instructions to upgrade the Main Unit's Firmware Codes.
You must process each firmware file separately in this manner and sequence.

Parent Firmware File Folder	Sub Firmware File Folder	Firmware File
\ UF-8200_AU_xxxxxx or \ UF-7200_AU_xxxxxx	\ **SC_STD** \ UF-8200**A**xVxxxxx_xx	UF-8200AxVxxxxx_xx.bin
	\ **fcb** \ UF-82_G3BAAVxxxxx_YC	UF-82_G3BAAVxxxxx_YC.bin



When you select the Parent Folder, the following Firmware Type window appears. Proper Firmware Files are selected automatically by selecting the Firmware Type.
The transferring order is set up automatically.

Note:

1. While updating the firmware code, the display may become garbled, however, it will return to normal upon completion of the firmware update.
2. Please refer to the service manual for additional details.
3. The suffix "_xx" for the Folder Name or File Name may not exist depending on the destination location.

3.5.4. Updating the Firmware using the Master Firmware SD Memory Card

Caution:

Do not remove the SD Memory Card or turn the power OFF during Formatting or while Updating the Firmware.

Note:

1. When a New (Blank) SD Memory Card is detected for the first time, a prompt for Formatting will appear on the LCD. The machine will format the SD Card for DATA (used for Fax Image, 1,000 Station Auto Dialer, JOB MIB Data, etc.), and it takes approximately 3 to 12 min. to format depending on the manufacturer, SD Memory Card size or Data Access Speed of the SD Card.
2. To Update the Firmware or to Format an SD Memory Card using the F9-15 Service Mode takes approximately 5 sec. Refer to 3.5.6. (Formatting the SD Memory Card).

1) When a DATA SD Card is Not installed

1. Before starting, print the F5/F6 Parameters List (Copy Service Mode F9-03-00).
2. Disconnect the Telephone Line, LAN and/or USB Cables.
3. Unplug the AC Power Cord to turn off power. (During a Lightning Storm, to prevent electrocution disconnect the Telephone Line Cable first before unplugging the AC Power Cord.)
4. Install the appropriate Master Firmware SD Memory Card into the machine.
5. Plug the AC Power Cord to turn on power.
6. Press the **“Function”**, **“Original Size”**, and the **“3”** keys sequentially.
7. Input the ID, and press the **“Set”** key to enter the Service Mode (default ID is **00000000**).
8. Perform the Copy Service Mode F9-07-00 (Update From Master SD Card).
9. The firmware is copied into the machine.
   Selecting the **“Auto Mode”**, copies all the necessary firmware at once.
10. After the update is completed, the machine reboots itself and returns to standby.
11. Unplug the AC Power Cord to turn off power.
12. Remove the Master Firmware SD Memory Card from the machine.
13. Plug the AC Power Cord to turn on power.
14. Reconnect the Telephone Line, LAN and/or USB Cables.
15. Reprogram the F5 & F6 Parameters according to the lists printed in Step 1. if the settings are other than factory default.

2) When a DATA SD Card is installed

1. Before starting, print the F5/F6 Parameters List (Copy Service Mode F9-03-00).
2. Disconnect the Telephone Line, LAN and/or USB Cables.
3. Unplug the AC Power Cord to turn off power. (During a Lightning Storm, to prevent electrocution disconnect the Telephone Line Cable first before unplugging the AC Power Cord.)
4. Remove the **DATA SD Card** from the machine.
5. Install the appropriate Master Firmware SD Memory Card into the machine.
6. Plug the AC Power Cord to turn on power.
7. Press the **"Function"**, **"Original Size"**, and the **"3"** keys sequentially.
8. Input the ID, and press the **"Set"** key to enter the Service Mode (default ID is **00000000**).
9. Perform the Copy Service Mode F9-07-00 (Update From Master SD Card).
10. The firmware is copied into the machine.
    Selecting the **"Auto Mode"**, copies all the necessary firmware at once.
11. After the update is completed, the machine reboots itself and returns to standby.
12. Unplug the AC Power Cord to turn off power.
13. Remove the Master Firmware SD Memory Card from the machine.
14. Reinstall the **DATA SD Card** into the machine.
15. Plug the AC Power Cord to turn on power.
16. Reconnect the Telephone Line, LAN and/or USB Cables.
17. Reprogram the F5 & F6 Parameters according to the lists printed in Step 1. if the settings are other than factory default.

Note:

After the update is completed, the machine reboots itself and returns to standby mode.
Selecting the "Auto Mode", prompts the unit to check the configuration and installed options, and all the necessary firmware is updated automatically.
Confirm that the update was successfully completed by checking the Firmware Version with F9 Parameters F9-02-xx.

Caution:

If the unit does not boot up properly in Step 9., refer to 3.5.7. (Firmware Emergency Recovery)

3.5.5. Creating a Master Firmware SD Memory Card using a PC

1) Install the "SD Memory Card Firmware Writing Tool" to your PC.

The Tool can be downloaded from your sales company's Web Site. Please refer to the Tool's Operating Instructions file for additional details.

2) Preparing the Firmware Code

Access the Service Web site to download the latest Firmware Code. When performing the self-extraction wizard for preparing the Firmware Code File, the Archive will be extracted automatically into the designated folder.

Example:
From:

Firmware Code File:	UF-8200_AU_xxxxxx.exe or UF-7200_AU_xxxxxx.exe

To:

Firmware Data Folder:	C:\ Panasonic \ Panasonic-FUP \ Data

3) Preparing the Master Firmware SD Memory Card

1. Insert the SD Memory Card (32 MB to 2 GB) into the SD Memory Card Slot.
2. Perform the SD Memory Card Firmware Writing Tool.
3. After all firmware codes are copied, remove the SD Memory Card from the Slot.

The SD Memory Card is now ready to use for firmware update.
(Refer to the Local Firmware Update Tool OI and the SD Memory Card Firmware Writing Tool OI.)

3.5.6. Formatting the SD Memory Card

To make the Master Firmware SD Card, format the Card first by following the steps below. If the Card will be used to update the Firmware of other machines, format the Card first with the Service Mode F9-15.

Caution:

Do not remove the SD Memory Card or turn the power OFF during Formatting or while Updating the Firmware.

Note:

The Master Firmware SD Card can be installed or removed without turning the power OFF, however, an SD Memory Card formatted for DATA requires the power to be cycled OFF and ON after its installation or removal.

1) When a DATA SD Card is Not installed

1. Disconnect the Telephone Line, LAN and/or USB Cables.
2. Unplug the AC Power Cord to turn off power. (During a Lightning Storm, to prevent electrocution disconnect the Telephone Line Cable first before unplugging the AC Power Cord.)
3. Install the SD Card into the machine.
4. Plug the AC Power Cord to turn on power.
5. Press the **“Function”**, **“Original Size”**, and the **“3”** keys sequentially.
6. Input the ID, and press the **“Set”** key to enter the Service Mode (default ID is **00000000**).
7. Select the Service Mode “F9-15 (SD Card Format)”.
8. Perform the Service Mode F9-15 (SD Card Format).
9. After the SD Card is formatted, the machine goes to Service Mode F9.
10. Press the **“Stop”** key first and press the **“Function”**, **“Clear”** keys sequentially to exit the Service Mode.
11. Unplug the AC Power Cord to turn off power.
12. Remove the SD Memory Card from the machine.
13. Plug the AC Power Cord to turn on power.
14. Reconnect the Telephone Line, LAN and/or USB Cables.

Note:

Repeat steps 7. to 12. to continue formatting other SD Card(s).

2) When a DATA SD Card is installed

1. Disconnect the Telephone Line, LAN and/or USB Cables.
2. Unplug the AC Power Cord to turn off power. (During a Lightning Storm, to prevent electrocution disconnect the Telephone Line Cable first before unplugging the AC Power Cord.)
3. Remove the **DATA SD Card** from the machine.
4. Install the SD Card into the machine.
5. Plug the AC Power Cord to turn on power.
6. Press the **“Function”**, **“Original Size”**, and the **“3”** keys sequentially.
7. Input the ID, and press the **“Set”** key to enter the Service Mode (default ID is **00000000**).
8. Select the Service Mode “F9-15 (SD Card Format)”.
9. Perform the Service Mode F9-15 (SD Card Format).
10. After the SD Card is formatted, the machine goes to Service Mode F9.
11. Press the **“Stop”** key first and press the **“Function”**, **“Clear”** keys sequentially to exit the Service Mode.
12. Unplug the AC Power Cord to turn off power.
13. Remove the SD Memory Card from the machine.
14. Reinstall the **DATA SD Card** into the machine.
15. Plug the AC Power Cord to turn on power.
16. Reconnect the Telephone Line, LAN and/or USB Cables.

Note:

Repeat steps 8. to 13. to continue formatting other SD Card(s).

3.5.7. Firmware Emergency Recovery

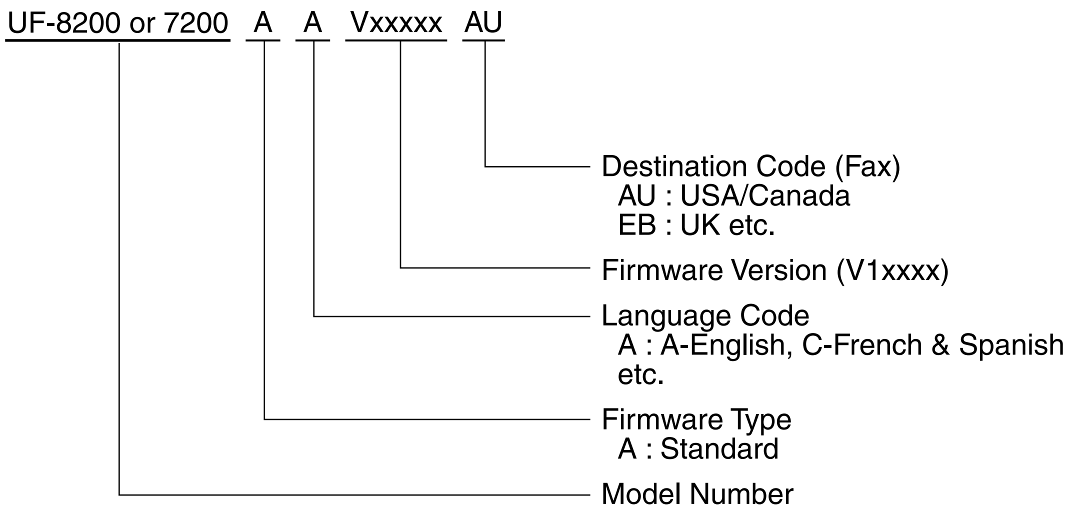
The easiest method to recover the firmware in an Emergency Recovery routine is to use the Master SD Memory Card method (1 SD Memory Card required if the SD Memory Card capacity is Large enough size for all necessary Firmware).
If the Master SD Memory Card includes all necessary firmware as a package, all necessary firmware can be recovered once, except the G3 Fax option.
After recovering, if optional G3 firmware is required, use the Network Firmware Update Tool, the Local Firmware Update Tool or use the Master SD Memory Card to update the firmware selecting the “Auto Mode” to the required level.
If the unit does not boot up properly, follow the steps below:

1. Turn the power OFF.
   Before proceeding to the next step, you must create the Master SD Memory Card (read the appropriate sections first 3.5.5.).
2. Turn the power On while holding the [ENERGY SAVER] button.
3. When the green lamp on the front panel turns On, release the [ENERGY SAVER] button.

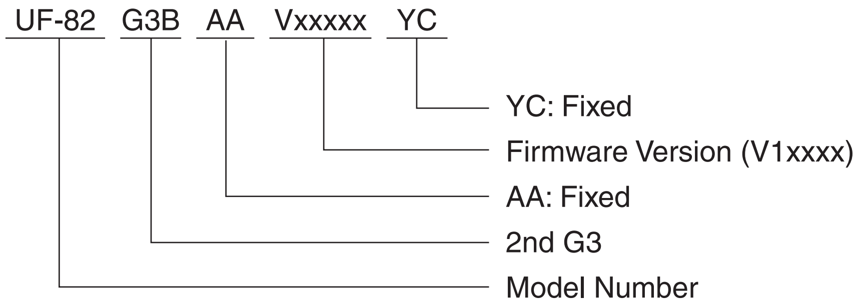
The unit is now ready to accept the firmware code from Master SD Memory Card.
If there is additional G3 firmware code file to be updated, use the Master SD Memory Card to update the firmware using the “Auto Mode” again.

3.5.8. Firmware Version

SC :


UF-8200 or 7200
A
A
Vxxxxx
AU
Destination Code (Fax)
AU : USA/Canada
EB : UK etc.
Firmware Version (V1xxxx)
Language Code
A : A-English, C-French & Spanish etc.
Firmware Type
A : Standard
Model Number

G3 :


UF-82
G3B
AA
Vxxxxx
YC
YC: Fixed
Firmware Version (V1xxxx)
AA: Fixed
2nd G3
Model Number

3.6. Adjusting the Printer Registration, LSU Image Side to Side

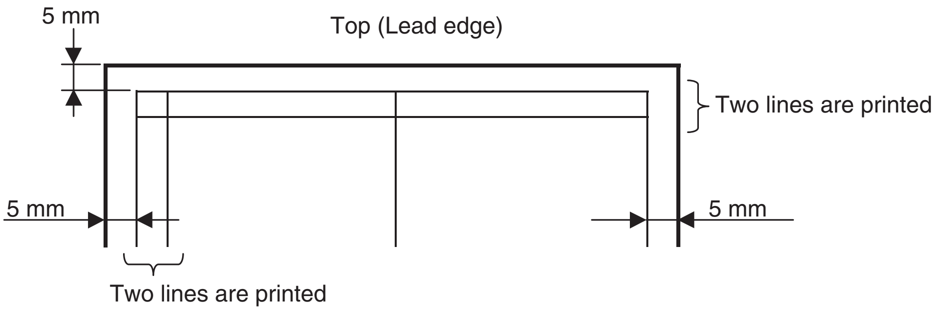
When installing the Paper Tray option, the following LSU Image Side to Side adjustment may be required.
The Printer registration is adjusted at the factory.
If copy image is abnormal, especially in the Rotation Copy mode, adjust it by the following procedure.

3.6.1. Printer Registration

1. Insert Letter or A4 size paper into the 1st tray and change the tray setting to the appropriate paper size. Empty all the remaining trays (including the bypass tray) to disable them.
2. Press the **“Function”**, **“Original Size”**, and the **“3”** keys sequentially.
3. Input the ID, and press the **“Set”** key to enter the Service Mode (default ID is **00000000**).
4. Perform the Service Mode F1-03 (Print Test Pattern 1).
5. Check the gap of the print pattern from the paper edge. (Refer to the <Figure>)
6. Perform the Service Mode F6-04 (Printer Registration) to adjust the gap to be 5 mm.
7. If the gap is less than 5 mm, input a (-) value. If more than 5 mm, input a (+) value.
8. Press the **“Stop”** key first and press the **“Function”**, **“Clear”** keys sequentially to exit the Service Mode.

<Figure>

Two lines are printed on the top (Lead edge).
For Letter or A4, place as Portrait.



3.6.2. LSU Image Side to Side Adjustment for the Tray

1. Insert Letter or A4 size paper into the 1st tray and change the tray setting to the appropriate paper size. Empty all the remaining trays (including the bypass tray) to disable them.

Note:
Do not pull out the 1st tray to disable it when adjusting the 2nd tray. The 1st tray is required as it acts as a paper path for the paper in the 2nd tray.

2. Press the **“Function”**, **“Original Size”**, and the **“3”** keys sequentially.
3. Input the ID, and press the **“Set”** key to enter the Service Mode (default ID is **00000000**).
4. Perform the Service Mode F1-03 (Print Test Pattern 1).
5. Check the gap of the print pattern from the paper edge. (Refer to the "3.6.1. <Figure>")
6. Perform the Service Mode F6-10 to F6-12, to adjust the gap to be 5 mm.
7. If the gap is less than 5 mm, input a (+) value. If more than 5 mm, input a (-) value.
8. Press the **“Stop”** key first and press the **“Function”**, **“Clear”** keys sequentially to exit the Service Mode.

3.6.3. ADF Original Read Edge & ADF Main Scan Adjustments

1. Place the Original Document on the ADF.
2. Insert Letter or A4 size paper into the 1st tray and change the tray setting to the appropriate paper size. Empty all the remaining trays (including the bypass tray) to disable them.
3. Press the **“Function”**, **“Original Size”**, and the **“3”** keys sequentially.
4. Input the ID, and press the **“Set”** key to enter the Service Mode (default ID is **00000000**).

5. Perform the Service Mode F2 (Single Copy Test).
6. Check the Image size of the Copy and the Original as Portrait.
7. Perform the Service Mode F6-91 (Original Read Edge ADF), to adjust the ADF Original Read Edge.
8. If the gap is less than the Original, input a (+) value. If bigger than the Original, input a (-) value.
9. Perform the Service Mode F6-90 (ADF Image Read Start), to adjust the ADF Main Scan for Side position.
10. If the gap is less than the Original, input a (+) value. If bigger than the Original, input a (-) value.
11. Press the **“Stop”** key first and press the **“Function”**, **“Clear”** keys sequentially to exit the Service Mode.

3.7. Signal Waveform

3.7.1. Glossary of Electrical Abbreviations

Glossary of Electrical Abbreviations	
Signal Name	**Function**
+24V	+24 VDC Power Supply
+24VA	+24 VDC Power Supply
+24VIR	+24 VDC Power Supply
+3.3V	+3.3 VDC Power Supply
+5V	+5 VDC Power Supply
+5VA	+5 VDC Power Supply
+5VB	+5 VDC Power Supply
+5VP	+5 VDC Power Supply
+ACT	ACTIVE Lamp LED Power Supply
+ALM	ALARM Lamp LED Power Supply
+DAT	DATA Lamp LED Power Supply
24VGND	Ground
5VGND	Ground
A	Motor Control Signal
AA	Motor Control Signal
ACL	AC Power Supply (Live)
ACN	AC Power Supply (Neutral)
AGND	Ground
B	Motor Control Signal
BB	Motor Control Signal
BZCLK	Buzzer Signal Output
CCLK	Serial I/F Clock
CISCLK	CIS Clock
CLOCK_OP	CLOCK
CXD	Serial Data Command
FANNERR	Fan Error Detection Signal
FANPER	+24VDC Fan Power
FG	Ground
GND	Ground
IICSCL	IIC-Bus Clock
IICSDA	IIC-Bus Data
KIN0	PNL Key Signal (Key Line)
KIN1	PNL Key Signal (Key Line)
KIN2	PNL Key Signal (Key Line)
KIN3	PNL Key Signal (Key Line)
KIN4	PNL Key Signal (Key Line)
KIN5	PNL Key Signal (Key Line)
KIN6	PNL Key Signal (Key Line)
KIN7	PNL Key Signal (Key Line)
L+5V	+5 VDC through Process Interlock SW
L1	Telephone Line Signal
L2	Telephone Line Signal
LDADF DOOR	+1.2 VDC Power Supply
LDAPNT	ADF Paper Detection Sensor Signal

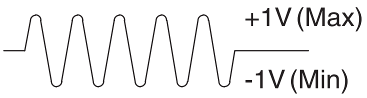
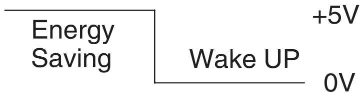
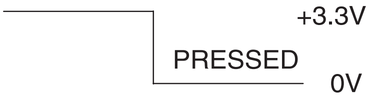
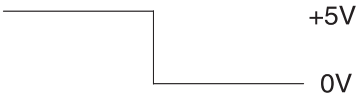
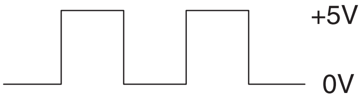
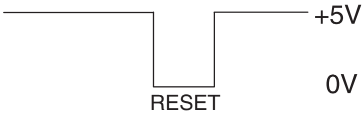
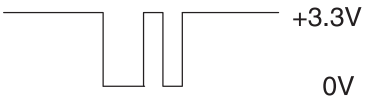
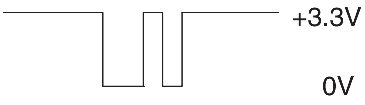
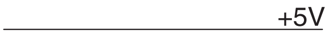
Glossary of Electrical Abbreviations	
Signal Name	**Function**
LDBPNT	+1.2 VDC Power Supply
LDCCHK	+1.2 VDC Power Supply
LDCCHK-OP	+1.2V
LDCPNT	ADF Paper Ejection Sensor Signal
LDEXITSEN	+1.2 VDC Energy Saver Control
LDJAMDOOR-OP	+1.2V
LDPLPOSISEN	+1.2V
LDPNON	+1.2 VDC Energy Saver Control
LDRELSEN	+1.2 VDC Power Supply
LDRNON-OP	+1.2V
MGND	Ground
N.C.	No Connection
nA	Motor Control Signal
nADUST	LSU APC timing
nAPNT	ADF Paper Detection Sensor Signal
nB	Motor Control Signal
nBPNT	ADF Read Point Detection signal
nCBSY	Busy Command
nCCHK	Paper Tray detect Signal
nCCHK_OP	2nd Feeder Option Detection Signal
nCCHK-OP	Paper Tray detect Signal
nCHGCTL	HVPS Charge Control (ON/OFF)
nCPNT	ADF Paper Ejection Sensor Signal
nCTONG3B	Ringer Detection Signal
nDB	Developer (+ Voltage PWM Pulse)
nDBCH	Developer Charge (+/- Change)
nEXITSEN	EXIT Sensor Signal
nFCTL	Fuser ON/OFF Control
nHKOFF	External Phone Off-Hook Detection Signal
nHSYNC	Horizontal Synchronization Signal
nIRQG3B	G3B Interrupt Request Signal
nJAMDOR_OP	2nd Feeder Option Detection Signal
nJAMDOR-OP	JAM Cover Sensor detect Signal
nLDON	LD Light Enable
nLED1	PNL LED Control Signal
nLED3	PNL LED Control Signal
nLED4	PNL LED Control Signal
nLED5	PNL LED Control Signal
nLED6	PNL LED Control Signal
nLED7	PNL LED Control Signal
nLED8	PNL LED Control Signal
nLED9	PNL LED Control Signal
nLEDACT	ACTIVE Lamp LED Control Signal
nLEDALM	ALARM Lamp LED Control Signal
nLEDDAT	DATA Lamp LED Control Signal
nLEDDBK	PNL LCD Back Light Control Signal
nLEDSLP	Energy Saver Lamp LED Control Signal
nLPOW	Power Control Signal

Glossary of Electrical Abbreviations	
Signal Name	**Function**
nMMCTL	Main Motor Control Signal
nMMHALF	Motor Rotation Speed Control
nMMLD	Main Motor Rotation Signal
nMPOW1	Power Supply Control Signal
nOPG3B	G3B Detection Signal
nOPTION	2nd Feeder Option Detection Signal
nPLPOSISEN	Paper Lead Position
nPNLRST	PNL Reset Signal
nPNON-OP	No Paper Sensor detect Signal
nPON_OP	2nd Feeder No Paper Detection Signal
nPRDY	Printer Ready
nPRINT	Print Start
nPRTRST	Printer Reset
nPUCTL_OP	2nd Feeder Paper Pick up Control
nPURGE	Paper End Detection Signal
nRESET_OP	2nd Feeder Option Detection Signal
nRING	Ring Detection Signal
nSNDKY	PNL Key Signal
nSBSY	Busy Status
nSCN[1]	PNL Key Signal (Scan Line)
nSCN[10]	PNL Key Signal (Scan Line)
nSCN[11]	PNL Key Signal (Scan Line)
nSCN[2]	PNL Key Signal (Scan Line)
nSCN[3]	PNL Key Signal (Scan Line)
nSCN[4]	PNL Key Signal (Scan Line)
nSCN[5]	PNL Key Signal (Scan Line)
nSCN[6]	PNL Key Signal (Scan Line)
nSCN[7]	PNL Key Signal (Scan Line)
nSCN[8]	PNL Key Signal (Scan Line)
nSCN[9]	PNL Key Signal (Scan Line)
nSLPKY	Energy Saver Key Signal
nSNRCLK	LSU Motor Clock
nSNRCTL	LSU Motor Control Signal
nSNRLD	LSU Motor Lock Signal
nSPCWAKE	Wake Up Control
nTECTL	Low Toner LED Control
nTESEN	Low Toner Sensor Signal
nTOP	Paper Top Detection Signal
nTR	Transfer (- Voltage PWM Pulse)
nTRCTL	HVPS Transfer Control (+/- Change)
nVIDEO	Video Signal
nWAKE	Wake Up Signal
pADF DOOR	ADF Door Open/Close Signal
pCMLD	Line Switching Relay Drive Signal
pENABLE_OP	2nd Feeder Motor Control Signal
pEXTRYSN	Not Use
pG3BRST	G3B Reset Signal
pLEDBON	bLED ON/OFF Control

Glossary of Electrical Abbreviations	
Signal Name	**Function**
pLEDGON	gLED ON/OFF Control
pLEDRON	rLED ON/OFF Control
PNLRXD	PNL Reception Data Signal
PNLTXD	PNL Transmission Data Signal
PNON	No Paper Sensor Signal
pREGSEN	Registration Sensor Signal
pSAVE	Power Save Control Signal
pSCNRST	Scanner
pSENTIM	Scanner Horizontal Synchronous Signal
pSREQ	Scanner Request Signal
PUSOL_CTL	Pick Up Solenoid Control
PUSOL_CTL1	Pick Up Solenoid Control
pVREQ	Scanner Vertical Synchronous Request Signal
REGSOL_CTL	Registration Solenoid Control
SCLD0	IIC-Bus Clock
SDA0	IIC-Bus Data
SEL	CIS. Resolution Selection
SI	Scan Data Frame Signal
SIG	Scanner Serial Data
SPCIIC	IIC-Bus SDR Interrupt
SPKOUT	Line Signal Dial Tone Ringer Key Tone
SXD	Serial Data Status
TH	Fuser Thermistor Signal
VCC	+5VDC Power Supply
VREF	Dark Reference Control

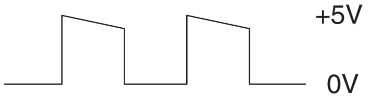
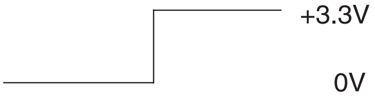
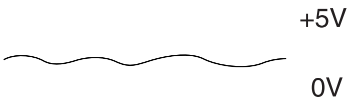
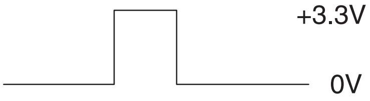
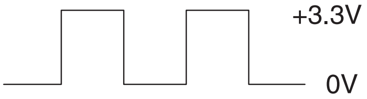
3.7.2. SC PC Board

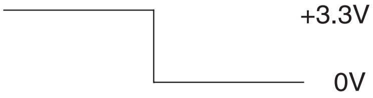
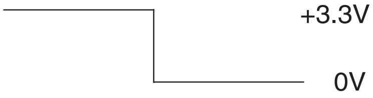
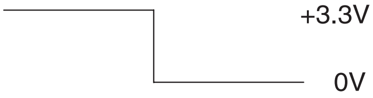
CN501

SC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN501-1	AGND	SPAKER (-)		Ground
CN501-2	SPKOUT	SPAKER (+)	 +1V (Max) -1V (Min)	Line Signal, Dial Tone, Ringer, Key Tone
CN501-3	nWAKE	PNL1 PCB CN230-13	 Energy Saving Wake UP +5V 0V	Wake Up Signal
CN501-4	nSLPKY	PNL1 PCB CN230-12	 +3.3V PRESSED 0V	Energy Saver Key Signal
CN501-5	nLPOW	PNL1 PCB CN230-11		24V/5V Power Control Signal
CN501-6	BZCLK	PNL1 PCB CN230-10		Buzzer Signal
CN501-7	nPNLRST	PNL1 PCB CN230-9		PNL Reset Signal
CN501-8	PNLTXD	PNL1 PCB CN230-8		PNL Transmission Data Signal
CN501-9	PNLRXD	PNL1 PCB CN230-7		PNL Reception Data Signal
CN501-10	+5V	PNL1 PCB CN230-6		+5 VDC Power Supply
CN501-11	+5VP	PNL1 PCB CN230-5		+5 VDC Power Supply
CN501-12	GND	PNL1 PCB CN230-4		Ground

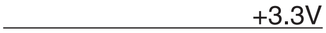
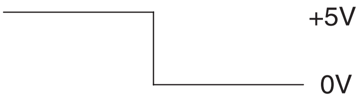
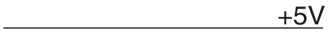
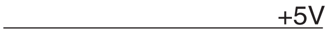
SC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN501-13	GND	PNL1 PCB CN230-3	0V	Ground
CN501-14	GND	PNL1 PCB CN230-2	0V	Ground
CN501-15	+24V	PNL1 PCB CN230-1	+24V	+24 VDC Power Supply

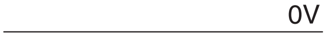
CN502

SC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN502-1	SIG	CRB PCB CN802-13		Scanner Serial Data
CN502-2	SEL	CRB PCB CN802-12		CIS. Resolution Selection
CN502-3	GND	CRB PCB CN802-11	0V	Ground
CN502-4	+5VA	CRB PCB CN802-10	+5V	+5VDC Power Supply
CN502-5	VREF	CRB PCB CN802-9		Dark Reference Control
CN502-6	SI	CRB PCB CN802-8		Scanner Data Frame Signal
CN502-7	GND	CRB PCB CN802-7	0V	Ground
CN502-8	CISCLK	CRB PCB CN802-6		CIS Clock
CN502-9	GND	CRB PCB CN802-5	0V	Ground

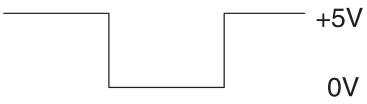
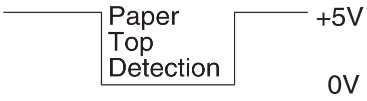
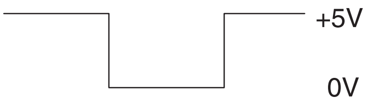
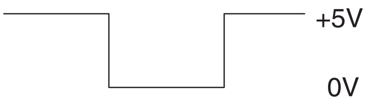
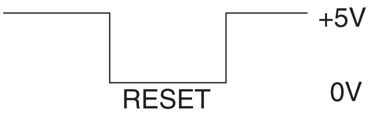
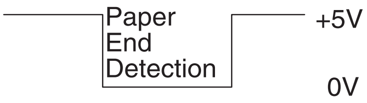
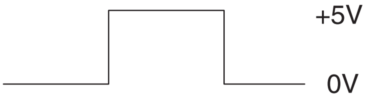
SC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN502-10	pLEDBON	CRB PCB CN802-4		Not Use
CN502-11	pLEDGON	CRB PCB CN802-3		gLED ON/OFF Control
CN502-12	pLEDRON	CRB PCB CN802-2		Not Use

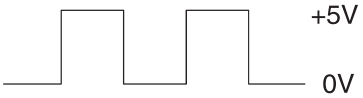
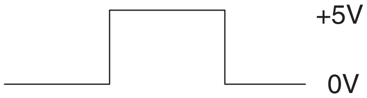
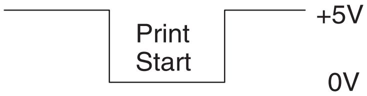
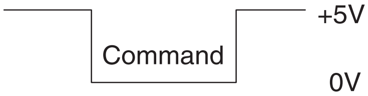
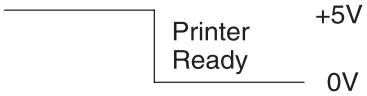
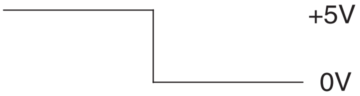
CN504

SC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN504-1	pEXTRYSN	SPC PCB CN704-12		Not Use
CN504-2	nLPOW	SPC PCB CN704-11		Power Save Control
CN504-3	+5VP	SPC PCB CN704-10		+5 VDC Power Supply
CN504-4	+5VA	SPC PCB CN704-9		+5 VDC Power Supply
CN504-5	GND	SPC PCB CN704-8		Ground
CN504-6	GND	SPC PCB CN704-7		Ground
CN504-7	+24V	SPC PCB CN704-6		+24 VDC Power Supply
CN504-8	MGND	SPC PCB CN704-5		Ground
CN504-9	+5V	SPC PCB CN704-4		+5 VDC Power Supply

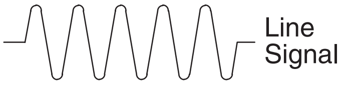
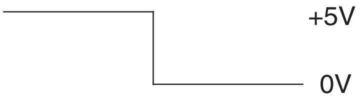
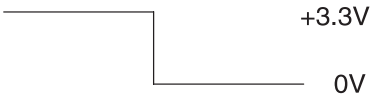
SC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN504-10	+5V	SPC PCB CN704-3		+5 VDC Power Supply
CN504-11	GND	SPC PCB CN704-2		Ground
CN504-12	GND	SPC PCB CN704-1		Ground

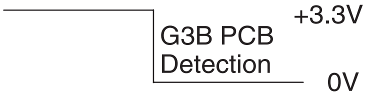
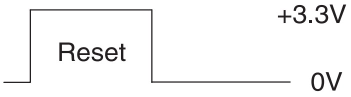
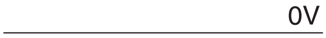
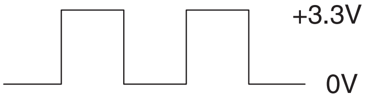
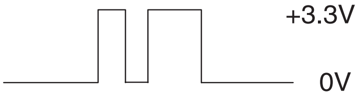
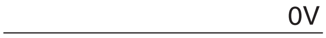
CN505

SC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN505-1	GND	Engine Control PCB CN721-16		Ground
CN505-2	nVIDEO	Engine Control PCB CN721-15		Video Signal
CN505-3	GND	Engine Control PCB CN721-14		Ground
CN505-4	nTOP	Engine Control PCB CN721-13	 Paper Top Detection +5V 0V	Paper Top Detection Signal
CN505-5	nSBSY	Engine Control PCB CN721-12		Busy Status
CN505-6	nHSYNC	Engine Control PCB CN721-11		Horizontal Synchronization Signal
CN505-7	nPRTRST	Engine Control PCB CN721-10		Printer Reset
CN505-8	nPURGE	Engine Control PCB CN721-9	 Paper End Detection +5V 0V	Paper End Detection Signal
CN505-9	CXD	Engine Control PCB CN721-8		Serial Data Command

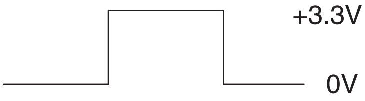
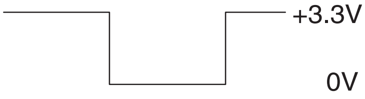
SC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN505-10	CCLK	Engine Control PCB CN721-7		Serial I/F Clock
CN505-11	SXD	Engine Control PCB CN721-6		Serial Data Status
CN505-12	nPRINT	Engine Control PCB CN721-5	 Print Start +5V 0V	Print Start
CN505-13	nCBSY	Engine Control PCB CN721-4	 Command +5V 0V	Busy Command
CN505-14	nPRDY	Engine Control PCB CN721-3	 Printer Ready +5V 0V	Printer Ready
CN505-15	GND	Engine Control PCB CN721-2		Ground
CN505-16	pSAVE	Engine Control PCB CN721-1		Power Save Control Signal

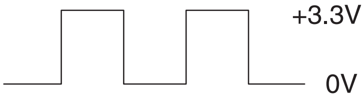
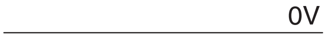
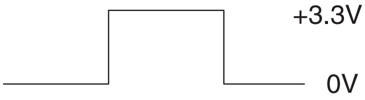
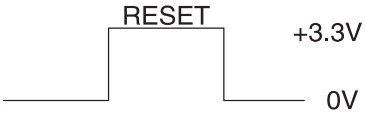
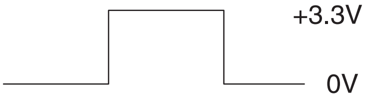
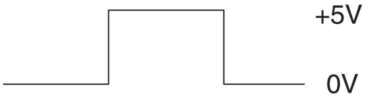
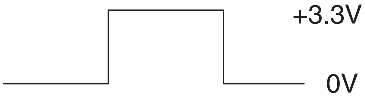
CN510

SC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN510-1	AGND	G3B PCB CN363-14		Ground
CN510-2	AOUTG3B	G3B PCB CN363-13	 Line Signal	Line Signal
CN510-3	nCTONG3B	G3B PCB CN363-12		Ringer Detection Signal
CN510-4	nIRQG3B	G3B PCB CN363-11		G3B Interrupt Request Signal
CN510-5	GND	G3B PCB CN363-10		Ground

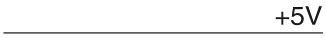
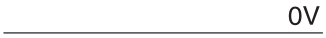
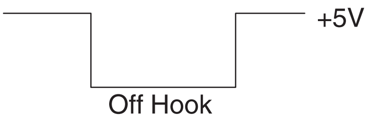
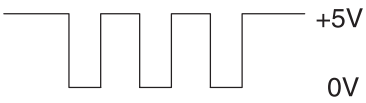
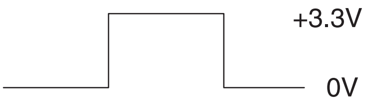
SC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN510-6	nOPG3B	G3B PCB CN363-9	 +3.3V G3B PCB Detection 0V	G3B Detection Signal
CN510-7	pG3BRST	G3B PCB CN363-8	 +3.3V Reset 0V	G3B Reset Signal
CN510-8	GND	G3B PCB CN363-7		Ground
CN510-9	SCLD0	G3B PCB CN363-6		IIC-Bus Clock
CN510-10	SDA0	G3B PCB CN363-5		IIC-Bus Data
CN510-11	GND	G3B PCB CN363-4		Ground
CN510-12	GND	G3B PCB CN363-3		Ground
CN510-13	+3.3V	G3B PCB CN363-2		+3.3 VDC Power Supply
CN510-14	+5V	G3B PCB CN363-1		+5 VDC Power Supply

CN518

SC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN518-1	GND	SPC PCB P716-10		Ground
CN518-2	SPCIIC	SPC PCB P716-9		IIC-Bus SDR Interrupt
CN518-3	nSPCWAKE	SPC PCB P716-8		Wake Up Control

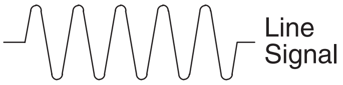
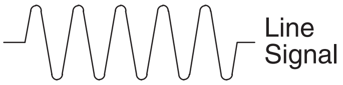
SC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN518-4	IICSCL	SPC PCB P716-7		IIC-Bus Clock
CN518-5	GND	SPC PCB P716-6		Ground
CN518-6	IICSDA	SPC PCB P716-5		IIC-Bus Data
CN518-7	pSCNRST	SPC PCB P716-4		Scanner
CN518-8	pSREQ	SPC PCB P716-3		Scanner Request Signal
CN518-9	pVREQ	SPC PCB P716-2		Scanner Vertical Synchronous Request Signal
CN518-10	pSENTIM	SPC PCB P716-1		Scanner Horizontal Synchronous Signal

CN519

SC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN519-1	+5VP	MJR PCB CN302-7		+5VDC Power Supply
CN519-2	GND	SPC PCB CN302-6		Ground
CN519-3	nHKOFF	SPC PCB CN302-5		External Phone Off-Hook Detection Signal
CN519-4	nRING	SPC PCB CN302-4		Ring Detection Signal
CN519-5	pCMLD	SPC PCB CN302-3		Line Switching Relay Drive Signal

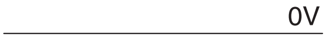
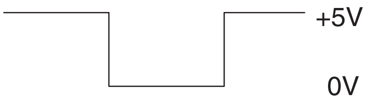
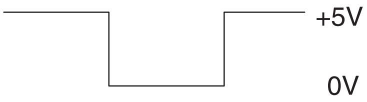
SC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN519-6	GND	SPC PCB CN302-2		Ground
CN519-7	+5V	SPC PCB CN302-1		+5V DC Power Supply

CN520

SC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN520-1	L2	MJR PCB CN301-1		Telephone Line Signal
CN520-3	L1	SPC PCB CN301-3		Telephone Line Signal

3.7.3. SPC PC Board

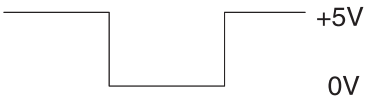
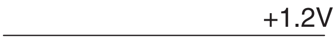
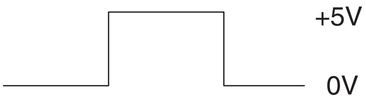
CN701

SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN701-1	LDAPNT	Document Sensor-3		+1.2 VDC Power Supply
CN701-2	GND	Document Sensor-2		Ground
CN701-3	nAPNT	Document Sensor-1		ADF Paper Detection Sensor Signal
CN701-4	LDCPNT	Ejection Sensor-3		+1.2 VDC Power Supply
CN701-5	GND	Ejection Sensor-2		Ground
CN701-6	nCPNT	Ejection Sensor-1		ADF Paper Ejection Sensor Signal

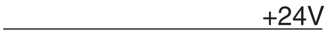
CN704

Refer to SC PC Board CN504.

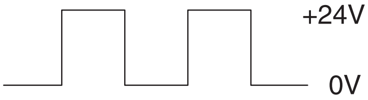
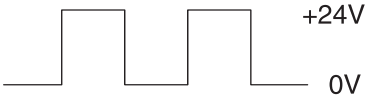
CN706

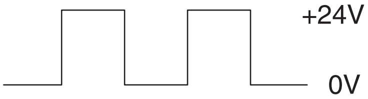
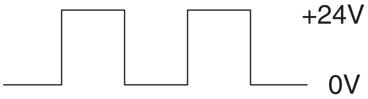
SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN706-1	LDBPNT	Read point Sensor-3		+1.2 VDC Power Supply
CN706-2	N.C.	Read point Sensor-2		No Connection
CN706-3	nBPNT	Read point Sensor-1		ADF Read Point Detection Signal
CN706-4	LDADF DOOR	ADF Door Sensor-3		+1.2 VDC Power Supply
CN706-5	N.C.	ADF Door Sensor-2		No Connection
CN706-6	pADF DOOR	ADF Door Sensor-1		ADF Door Open/Close Signal

CN709

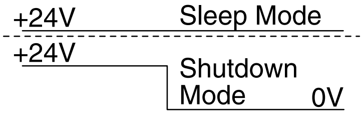
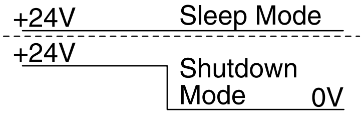
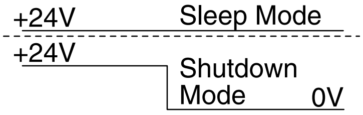
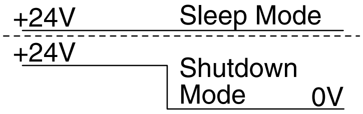
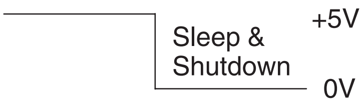
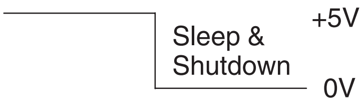
SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN709-1	+24V	STAMP Solenoid-1		+24 VDC Power Supply
CN709-2	MGND	STAMP Solenoid-2		Ground

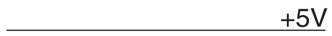
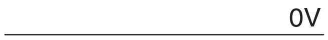
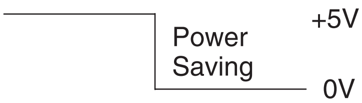
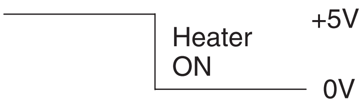
CN710

SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN710-1	nB	PH Motor-1		PH Motor Control Signal
CN710-2	B	PH Motor-3		PH Motor Control Signal

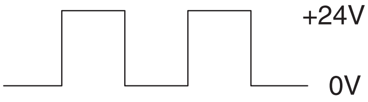
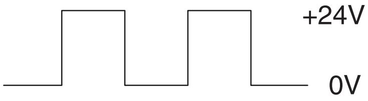
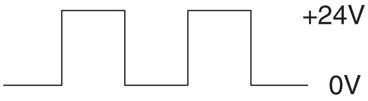
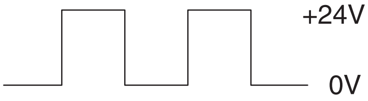
SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN710-3	nA	PH Motor-4		PH Motor Control Signal
CN710-4	A	PH Motor-6		PH Motor Control Signal

CN712

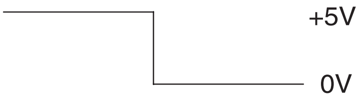
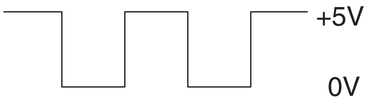
SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN712-1	+24V	LVPS CN103-1	 +24V Sleep Mode +24V Shutdown Mode 0V	+24 VDC Power Supply
CN712-2	+24V	LVPS CN103-2	 +24V Sleep Mode +24V Shutdown Mode 0V	+24 VDC Power Supply
CN712-3	+24V	LVPS CN103-3	 +24V Sleep Mode +24V Shutdown Mode 0V	+24 VDC Power Supply
CN712-4	+24V	LVPS CN103-4	 +24V Sleep Mode +24V Shutdown Mode 0V	+24 VDC Power Supply
CN712-5	MGND	LVPS CN103-5		Ground
CN712-6	MGND	LVPS CN103-6		Ground
CN712-7	MGND	LVPS CN103-7		Ground
CN712-8	+5V	LVPS CN103-8	 +5V Sleep & Shutdown 0V	+5 VDC Power Supply
CN712-9	+5V	LVPS CN103-9	 +5V Sleep & Shutdown 0V	+5 VDC Power Supply
CN712-10	GND	LVPS CN103-10		Ground

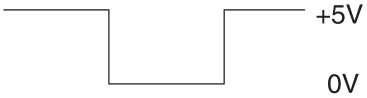
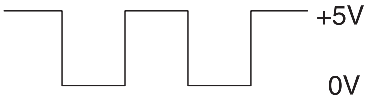
SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN712-11	+5VP	LVPS CN103-11		+5 VDC Power Supply
CN712-12	GND	LVPS CN103-12		Ground
CN712-13	nMPOW1	LVPS CN103-13		Power Supply Control Signal
CN712-14	nFCTL	LVPS CN103-14		Fuser ON/OFF Control
CN712-15	N.C.			No Connection

CN714

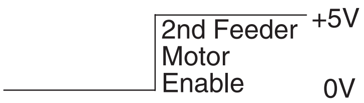
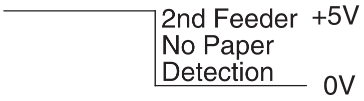
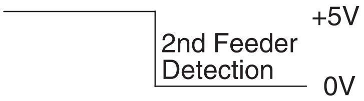
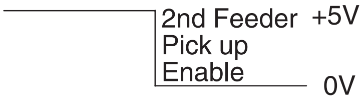
SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN714-1	nA	ADF Motor-1		ADF Motor Control Signal
CN714-2	A	ADF Motor-3		ADF Motor Control Signal
CN714-3	nB	ADF Motor-4		ADF Motor Control Signal
CN714-4	B	ADF Motor-6		ADF Motor Control Signal

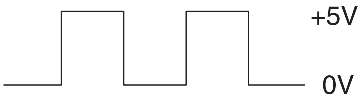
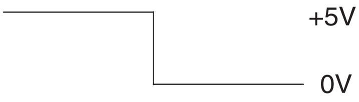
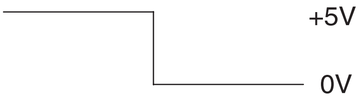
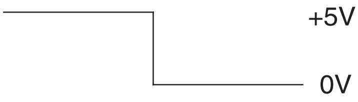
CN722

SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN722-1	nADUST	LSU PCB Laser Diode-1		LSU APC Timing
CN722-2	nVIDEO	LSU PCB Laser Diode-2		Video Signal

SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN722-3	nLDON	LSU PCB Laser Diode-3		LD Light Enable
CN722-4	5VGND	LSU PCB Laser Diode-4		Ground
CN722-5	L+5V	LSU PCB Laser Diode-5		+5 VDC through Process Interlock SW
CN722-6	5VGND	LSU PCB Laser Diode-6		Ground
CN722-7	nHSYNC	LSU PCB Laser Diode-7		Horizontal Synchronization Signal

CN724

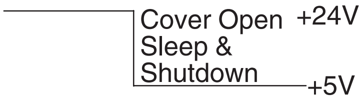
SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN724-1	+5V	2nd Paper Feed Module I/F PCB CN602-14		+5 VDC Power Supply
CN724-2	5VGND	2nd Paper Feed Module I/F PCB CN602-13		Ground
CN724-3	pENABLE_OP	2nd Paper Feed Module I/F PCB CN602-12	 2nd Feeder Motor Enable +5V 0V	2nd Feeder Motor Control Signal
CN724-4	nPON_OP	2nd Paper Feed Module I/F PCB CN602-11	 2nd Feeder No Paper Detection +5V 0V	2nd Feeder No Paper Detection Signal
CN724-5	nOPTION	2nd Paper Feed Module I/F PCB CN602-10	 +5V 2nd Feeder Detection 0V	2nd Feeder Option Detection Signal
CN724-6	nPUCTL_OP	2nd Paper Feed Module I/F PCB CN602-9	 2nd Feeder Pick up Enable +5V 0V	2nd Feeder Paper Pick up Control
CN724-7	24VGND	2nd Paper Feed Module I/F PCB CN602-8		Ground

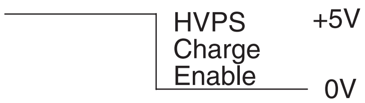
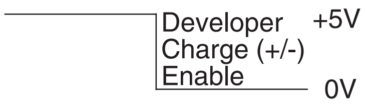
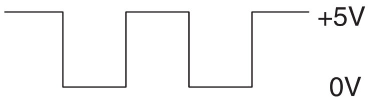
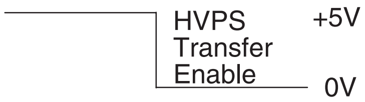
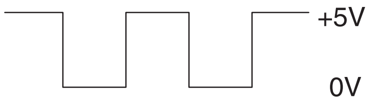
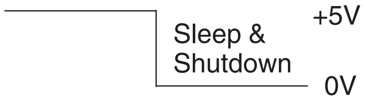
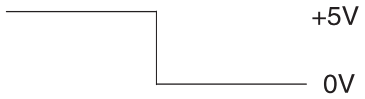
SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN724-8	24VGND	2nd Paper Feed Module I/F PCB CN602-7		Ground
CN724-9	+24V	2nd Paper Feed Module I/F PCB CN602-6		+24 VDC Power Supply
CN724-10	+24V	2nd Paper Feed Module I/F PCB CN602-5		+24 VDC Power Supply
CN724-11	CLOCK_OP	2nd Paper Feed Module I/F PCB CN602-4		CLOCK
CN724-12	nJAMDOR_OP	2nd Paper Feed Module I/F PCB CN602-3		2nd Feeder Option Detection Signal
CN724-13	nCCHK_OP	2nd Paper Feed Module I/F PCB CN602-2		2nd Feeder Option Detection Signal
CN724-14	nRESET_OP	2nd Paper Feed Module I/F PCB CN602-1		2nd Feeder Option Detection Signal

CN726

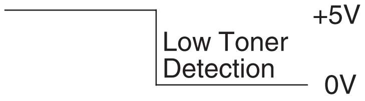
SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN726-1	+24V	Front Cover Safety Interlock SW-3		+24 VDC Power Supply
CN726-2	24VGND	Front Cover Safety Interlock SW-5		Ground
CN726-3	+24VIR	Front Cover Safety Interlock SW-1		+24 VDC Power Supply

CN728

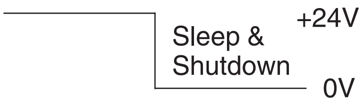
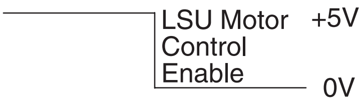
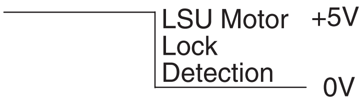
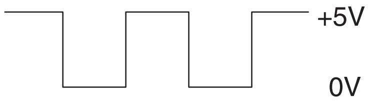
SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN728-1	+24VIR	HVPS PCB CN501-10		+24 VDC Power Supply

SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN728-2	24VGND	HVPS PCB CN501-9		Ground
CN728-3	24VGND	HVPS PCB CN501-8		Ground
CN728-4	nCHGCTL	HVPS PCB CN501-7	 HVPS Charge Enable +5V 0V	HVPS Charge Control (ON/OFF)
CN728-5	nDBCH	HVPS PCB CN501-6	 Developer Charge (+/-) Enable +5V 0V	Developer Charge (+/- Change)
CN728-6	nDB	HVPS PCB CN501-5		Developer (+ Voltage PWM Pulse)
CN728-7	nTRCTL	HVPS PCB CN501-4	 HVPS Transfer Enable +5V 0V	HVPS Transfer Control (+/- Change)
CN728-8	nTR	HVPS PCB CN501-3		Transfer (- Voltage PWM Pulse)
CN728-9	+5V	HVPS PCB CN501-2	 Sleep & Shutdown +5V 0V	+5 VDC Power Supply
CN728-10	nTECTL	HVPS PCB CN501-1		Low Toner LED Control

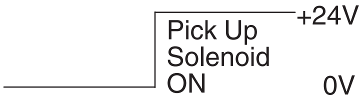
CN729

SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN729-1	nTESEN	Low Toner Sensor CN803-2	 Low Toner Detection +5V 0V	Low Toner Sensor Signal
CN729-2	5VGND	Low Toner Sensor CN803-1		Ground

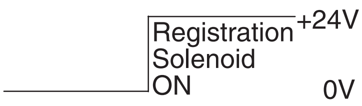
CN730

SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN730-1	+24V	LSU Motor-5	 +24V Sleep & Shutdown 0V	+24 VDC Power Supply
CN730-2	24VGND	LSU Motor-4		Ground
CN730-3	nSNRCTL	LSU Motor-3	 LSU Motor Control Enable +5V 0V	LSU Motor Control Signal
CN730-4	nSNRLD	LSU Motor-2	 LSU Motor Lock Detection +5V 0V	LSU Motor Lock Signal
CN730-5	nSNRCLK	LSU Motor-1		LSU Motor Clock

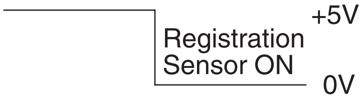
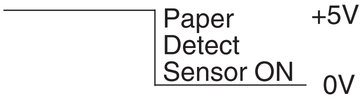
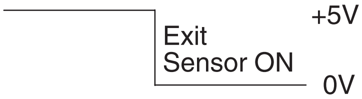
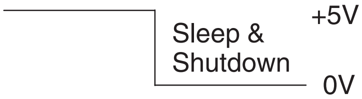
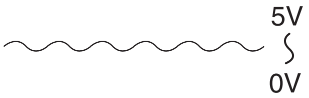
CN731

SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN731-1	PUSOL_CTL	Pick Up Solenoid-1	 Pick Up Solenoid ON +24V 0V	Pick Up Solenoid Control
CN731-2	24VGND	Pick Up Solenoid-2		Ground

CN732

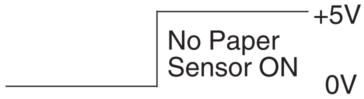
SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN732-1	REGSOL_CTL	Registration Solenoid-1	 Registration Solenoid ON +24V 0V	Registration Solenoid Control
CN732-2	24VGND	Registration Solenoid-2		Ground

CN734

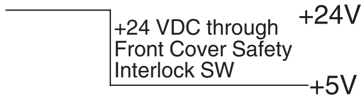
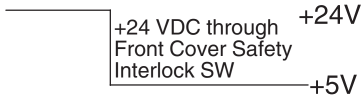
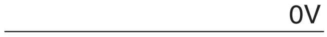
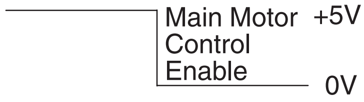
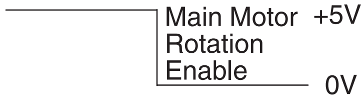
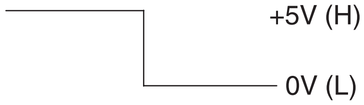
SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN734-1	LDRELSEN	Registration/ Paper Detect Sensor PC Board CN805-5	+1.2V	+1.2 VDC Power Supply
CN734-2	LDPLPOSISEN	Registration/ Paper Detect Sensor PC Board CN805-4	+1.2V	+1.2V
CN734-3	5VGND	Registration/ Paper Detect Sensor PC Board CN805-3	0V	Ground
CN734-4	pREGSEN	Registration/ Paper Detect Sensor PC Board CN805-2		Registration Sensor Signal
CN734-5	nPLPOSISEN	Registration/ Paper Detect Sensor PC Board CN805-1		Paper Lead Position
CN734-6	LDEXITSEN	Paper Exit Sensor PC Board CN803-3	+1.2V	+1.2 VDC Energy Saver Control
CN734-7	5VGND	Paper Exit Sensor PC Board CN803-2	0V	Ground
CN734-8	nEXITSEN	Paper Exit Sensor PC Board CN803-1		EXIT Sensor Signal
CN734-9	+5V	Thermistor-2		+5 VDC Power Supply
CN734-10	TH	Thermistor-1		Fuser Thermistor Signal

CN736

SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN736-2	5VGND	No Paper Sensor	0V	Ground

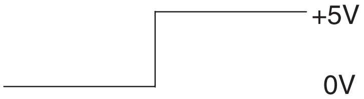
SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN736-2	PNON	No Paper Sensor	 +5V No Paper Sensor ON 0V	No Paper Sensor Signal
CN736-1	LDPNON	No Paper Sensor		+1.2 VDC Energy Saver Control

CN737

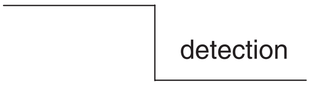
SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN737-1	+24VIR	Main Motor-7	 +24 VDC through Front Cover Safety Interlock SW +24V +5V	+24 VDC Power Supply
CN737-2	+24VIR	Main Motor-6	 +24 VDC through Front Cover Safety Interlock SW +24V +5V	+24 VDC Power Supply
CN737-3	24VGND	Main Motor-5		Ground
CN737-4	24VGND	Main Motor-4		Ground
CN737-5	nMMCTL	Main Motor-3	 Main Motor Control Enable +5V 0V	Main Motor Control Signal
CN737-6	nMMLD	Main Motor-2	 Main Motor Rotation Enable +5V 0V	Main Motor Rotation Signal
CN737-7	nMMHALF	Main Motor-1		Motor Rotation Speed Control H: 1908.35 RPM L: 954.18 RPM

CN738

SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN738-1	FANPER	Fan Motor-1		+24VDC Fan Power

SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN738-2	24VGND	Fan Motor-2		Ground
CN738-3	FANNERR	Fan Motor-3		Fan Error Detection Signal

CN741

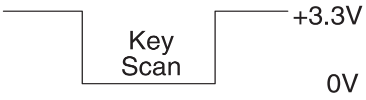
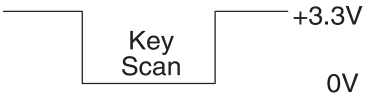
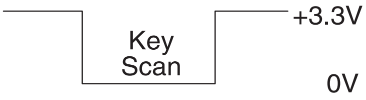
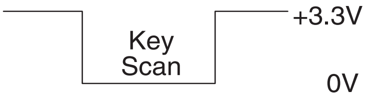
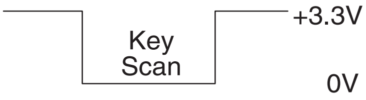
SPC PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN741-1	LDCCHK	Paper Tray detect Sensor-3		+1.2 VDC Power Supply
CN741-2	GND	Paper Tray detect Sensor-2		Ground
CN741-3	nCCHK	Paper Tray detect Sensor-1		Paper Tray detect Signal

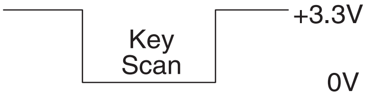
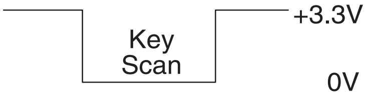
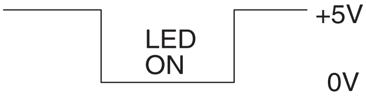
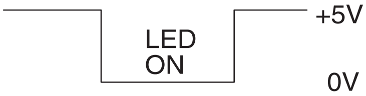
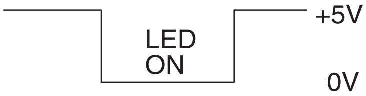
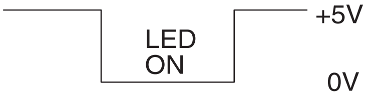
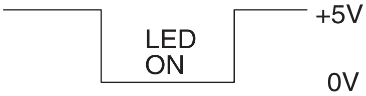
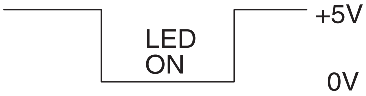
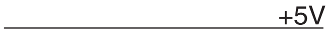
3.7.4. PNL1 PC Board

CN230

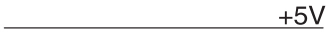
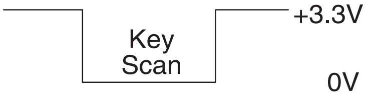
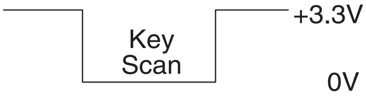
Refer to SC PC Board CN501.

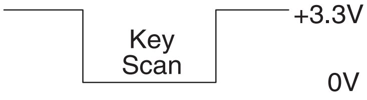
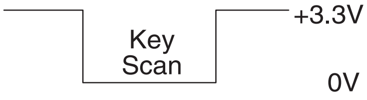
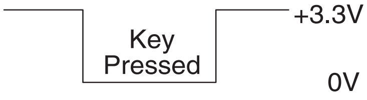
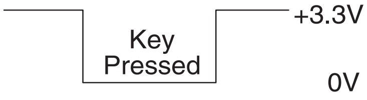
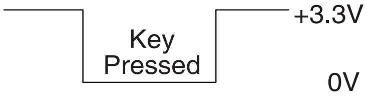
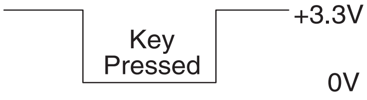
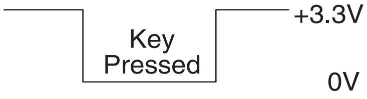
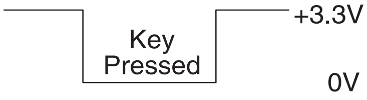
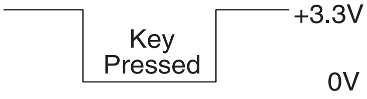
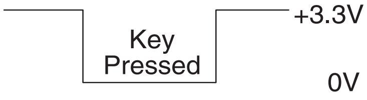
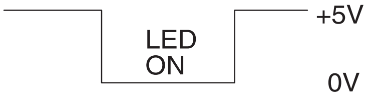
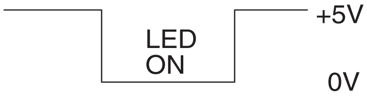
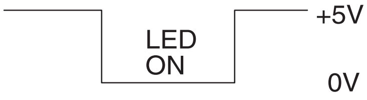
CN234

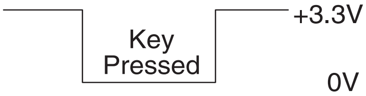
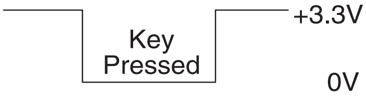
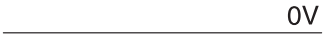
PNL1 PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN234-1	nSCN[1]	PNL2 PCB CN251-1	 Key Scan +3.3V 0V	PNL Key Signal (Scan Line)
CN234-2	nSCN[2]	PNL2 PCB CN251-2	 Key Scan +3.3V 0V	PNL Key Signal (Scan Line)
CN234-3	nSCN[7]	PNL2 PCB CN251-3	 Key Scan +3.3V 0V	PNL Key Signal (Scan Line)
CN234-4	nSCN[8]	PNL2 PCB CN251-4	 Key Scan +3.3V 0V	PNL Key Signal (Scan Line)
CN234-5	nSCN[9]	PNL2 PCB CN251-5	 Key Scan +3.3V 0V	PNL Key Signal (Scan Line)

PNL1 PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN234-6	nSCN[10]	PNL2 PCB CN251-6	 Key Scan +3.3V 0V	PNL Key Signal (Scan Line)
CN234-7	nSCN[11]	PNL2 PCB CN251-7	 Key Scan +3.3V 0V	PNL Key Signal (Scan Line)
CN234-8	nLED7	PNL2 PCB CN251-8		PNL LED Control Signal
CN234-9	nLED6	PNL2 PCB CN251-9		PNL LED Control Signal
CN234-10	nLED3	PNL2 PCB CN251-10		PNL LED Control Signal
CN234-11	nLED1	PNL2 PCB CN251-11		PNL LED Control Signal
CN234-12	nLED4	PNL2 PCB CN251-12		PNL LED Control Signal
CN234-13	nLEDSLP	PNL2 PCB CN251-13		Energy Saver Lamp LED Control Signal
CN234-14	+5VP	PNL2 PCB CN251-14		+5 VDC Power Supply

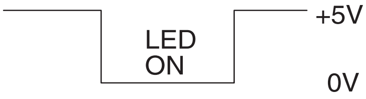
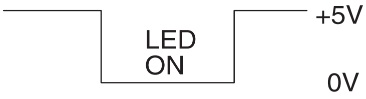
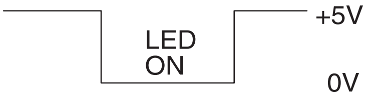
CN235

PNL1 PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN235-1	+5V	PNL2 PCB CN252-1		+5 VDC Power Supply
CN235-2	nSCN[3]	PNL2 PCB CN252-2	 Key Scan +3.3V 0V	PNL Key Signal (Scan Line)
CN235-3	nSCN[4]	PNL2 PCB CN252-3	 Key Scan +3.3V 0V	PNL Key Signal (Scan Line)

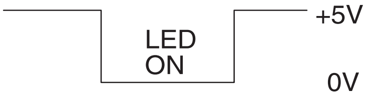
PNL1 PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN235-4	nSCN[5]	PNL2 PCB CN252-4	 +3.3V Key Scan 0V	PNL Key Signal (Scan Line)
CN235-5	nSCN[6]	PNL2 PCB CN252-5	 +3.3V Key Scan 0V	PNL Key Signal (Scan Line)
CN235-6	KIN7	PNL2 PCB CN252-6	 +3.3V Key Pressed 0V	PNL Key Signal (Key Line)
CN235-7	KIN6	PNL2 PCB CN252-7	 +3.3V Key Pressed 0V	PNL Key Signal (Key Line)
CN235-8	KIN5	PNL2 PCB CN252-8	 +3.3V Key Pressed 0V	PNL Key Signal (Key Line)
CN235-9	KIN4	PNL2 PCB CN252-9	 +3.3V Key Pressed 0V	PNL Key Signal (Key Line)
CN235-10	KIN3	PNL2 PCB CN252-10	 +3.3V Key Pressed 0V	PNL Key Signal (Key Line)
CN235-11	KIN2	PNL2 PCB CN252-11	 +3.3V Key Pressed 0V	PNL Key Signal (Key Line)
CN235-12	KIN1	PNL2 PCB CN252-12	 +3.3V Key Pressed 0V	PNL Key Signal (Key Line)
CN235-13	KIN0	PNL2 PCB CN252-13	 +3.3V Key Pressed 0V	PNL Key Signal (Key Line)
CN235-14	nLED5	PNL2 PCB CN252-14		PNL LED Control Signal
CN235-15	nLED8	PNL2 PCB CN252-15		PNL LED Control Signal
CN235-16	nLED9	PNL2 PCB CN252-16		PNL LED Control Signal

PNL1 PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN235-17	nSLPKY	PNL2 PCB CN252-17	 Key Pressed +3.3V 0V	Energy Saver Key Signal
CN235-18	nSNDKY	PNL2 PCB CN252-18	 Key Pressed +3.3V 0V	PNL Key Signal
CN235-19	GND	PNL2 PCB CN252-19		Ground
CN235-20	FG	PNL2 PCB CN252-20		Ground

CN236

PNL1 PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN236-1	nLEDDAT	PNL3 PCB CN254-1		DATA Lamp LED Control Signal
CN236-2	nLEDALM	PNL3 PCB CN254-2		ALARM Lamp LED Control Signal
CN236-3	nLEDACT	PNL3 PCB CN254-3		ACTIVE Lamp LED Control Signal
CN236-4	+ACT	PNL3 PCB CN254-4		ACTIVE Lamp LED Power Supply
CN236-5	+ALM	PNL3 PCB CN254-5		ALARM Lamp LED Power Supply
CN236-6	+DAT	PNL3 PCB CN254-6		DATA Lamp LED Power Supply

CN238

PNL1 PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN238-1	nLEDDBK	PNL4 PCB CN253-1		PNL LCD Back Light Control Signal

PNL1 PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN238-2	VCC	PNL4 PCB CN253-2		+5VDC Power Supply

3.7.5. PNL2 PC Board

CN251

Refer to PNL1 PC Board CN234.

CN252

Refer to PNL1 PC Board CN235.

3.7.6. PNL3 PC Board

CN254

Refer to PNL1 PC Board CN236.

3.7.7. PNL4 PC Board (UF-8300/8200)

CN253

Refer to PNL1 PC Board CN238.

3.7.8. G3B PC Board

CN363

Refer to SC PC Board CN510.

3.7.9. Registration/Paper Detect Sensor PC Board

CN805

Refer to SPC PC Board CN734.

3.7.10. Paper Exit Sensor PC Board

CN803

Refer to SPC PC Board CN734.

3.7.11. No Paper Sensor PC Board

Refer to SPC PC Board CN736.

3.7.12. Low Toner Sensor PC Board

CN803

Refer to SPC PC Board CN729.

3.7.13. HVPS

CN501

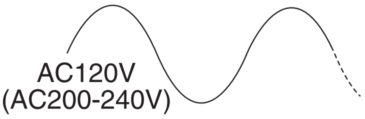
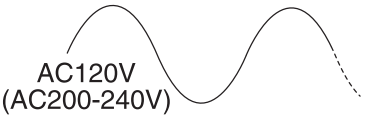
Refer to SPC PC Board CN728.

3.7.14. LVPS

CN103

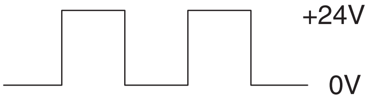
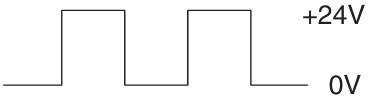
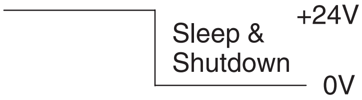
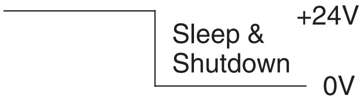
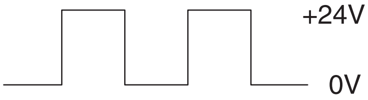
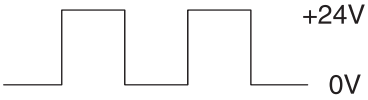
Refer to SPC PC Board CN712.

CN102

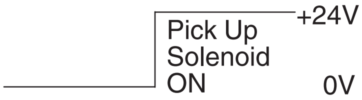
LVPS Pin No.	Signal Name	Destination	Signal Waveform	Function
CN102-1	ACL	Fuser Unit	 AC120V (AC200-240V)	AC Power Supply (Live)
CN102-3	ACN	Fuser Unit	 AC120V (AC200-240V)	AC Power Supply (Neutral)

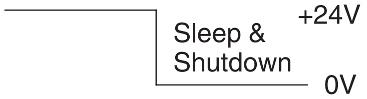
3.7.15. 2nd Feeder PC Board

CN600

2nd Feeder PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN600-1	B	2nd Feeder Motor-1		2nd Feeder Motor Control Signal
CN600-2	AA	2nd Feeder Motor-2		2nd Feeder Motor Control Signal
CN600-3	+24VA	2nd Feeder Motor-3	 Sleep & Shutdown +24V 0V	+24 VDC Power Supply
CN600-4	+24VA	2nd Feeder Motor-4	 Sleep & Shutdown +24V 0V	+24 VDC Power Supply
CN600-5	BB	2nd Feeder Motor-5		2nd Feeder Motor Control Signal
CN600-6	A	2nd Feeder Motor-6		2nd Feeder Motor Control Signal

CN601

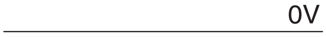
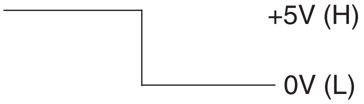
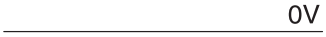
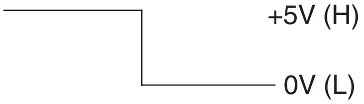
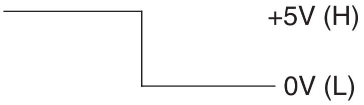
2nd Feeder PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN601-1	PUSOL_CTL1	Pick Up Solenoid-1	 Pick Up Solenoid ON +24V 0V	Pick Up Solenoid Control

2nd Feeder PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN601-2	+24V	Pick Up Solenoid-2		+24 VDC Power Supply

CN602

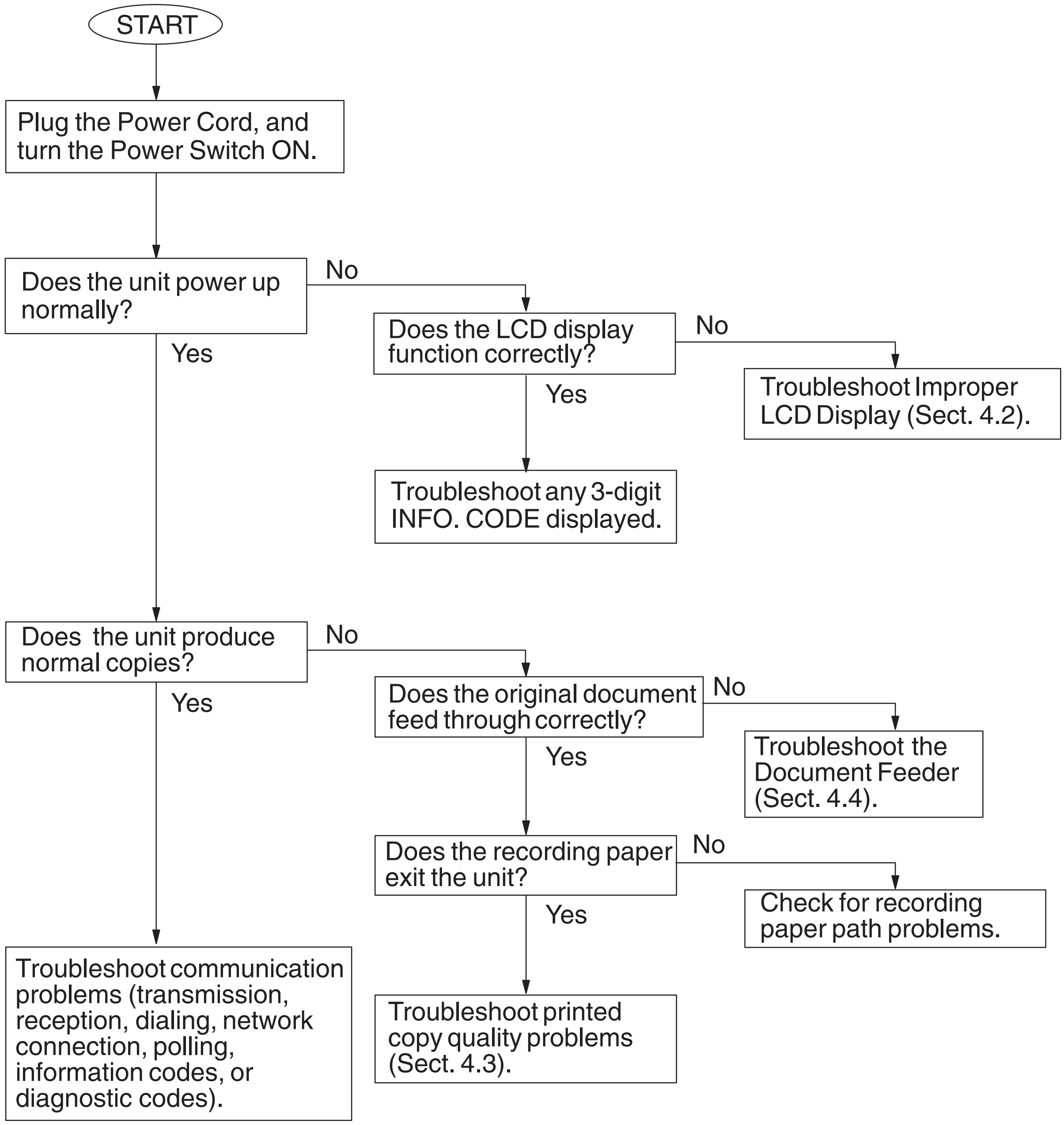
Refer to SPC PC Board CN724.

CN603

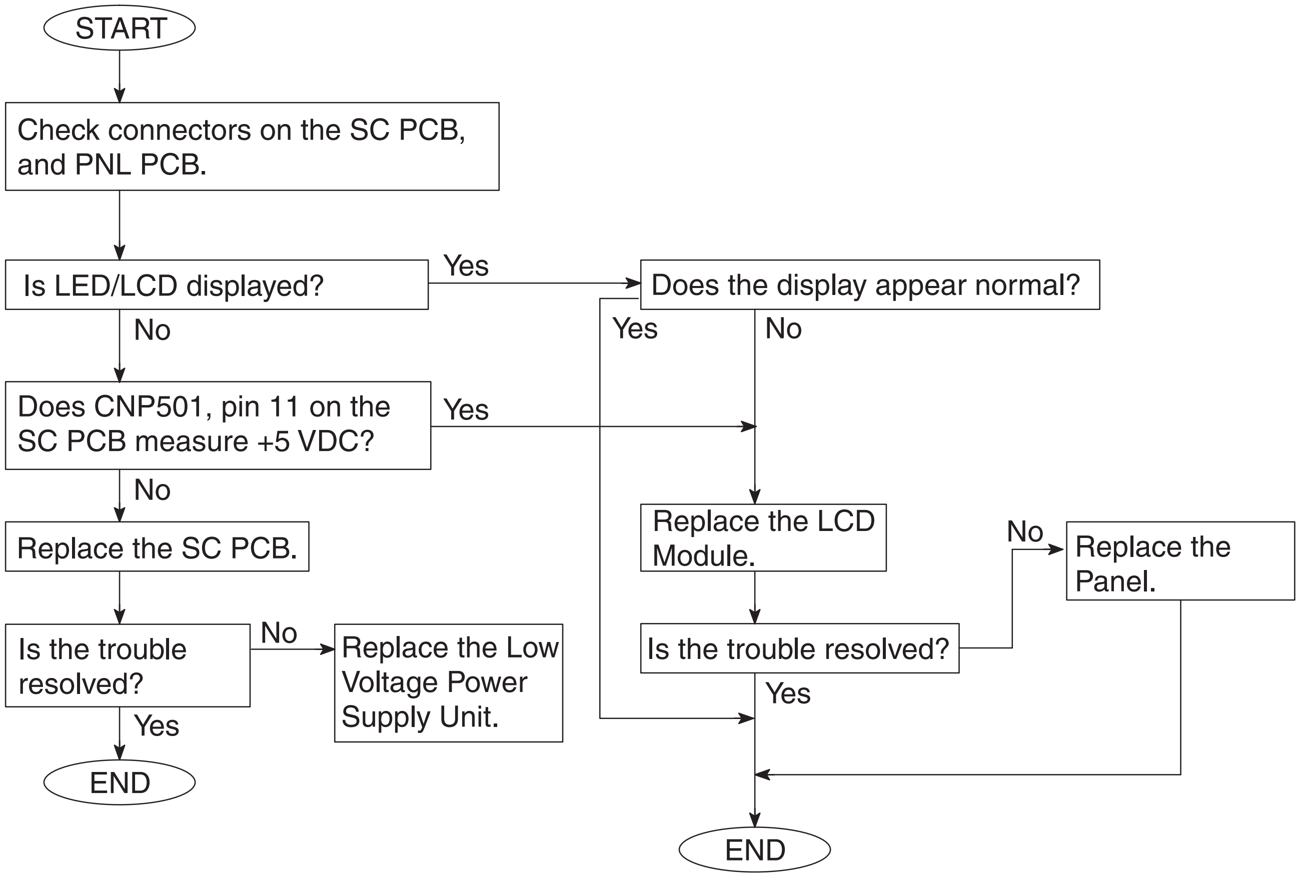
2nd Feeder PCB Pin No.	Signal Name	Destination	Signal Waveform	Function
CN603-1	LDJAMDOOR-OP	JAM Cover Sensor (2nd)-3		+1.2V
CN603-2	GND	JAM Cover Sensor (2nd)-2		Ground
CN603-3	nJAMDOR-OP	JAM Cover Sensor (2nd)-1		JAM Cover Sensor detect Signal
CN603-4	LDPNON-OP	No Paper Sensor (2nd)-3		+1.2V
CN603-5	GND	No Paper Sensor (2nd)-2		Ground
CN603-6	nPNON-OP	No Paper Sensor (2nd)-1		No Paper Sensor detect Signal
CN603-7	LDCCHK-OP	Paper Tray detect Sensor (2nd)-3		+1.2V
CN603-8	GND	Paper Tray detect Sensor (2nd)-2		Ground
CN603-9	nCCHK-OP	Paper Tray detect Sensor (2nd)-1		Paper Tray detect Signal

4 Troubleshooting

4.1. Initial Troubleshooting Flowchart


START
Plug the Power Cord, and turn the Power Switch ON.
Does the unit power up normally?
No
Does the LCD display function correctly?
No
Troubleshoot Improper LCD Display (Sect. 4.2).
Yes
Troubleshoot any 3-digit INFO. CODE displayed.
Yes
Does the unit produce normal copies?
No
Does the original document feed through correctly?
No
Troubleshoot the Document Feeder (Sect. 4.4).
Yes
Does the recording paper exit the unit?
No
Check for recording paper path problems.
Yes
Troubleshoot printed copy quality problems (Sect. 4.3).
Yes
Troubleshoot communication problems (transmission, reception, dialing, network connection, polling, information codes, or diagnostic codes).

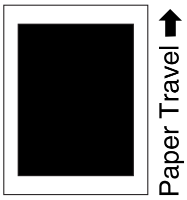
4.2. Improper LCD Display

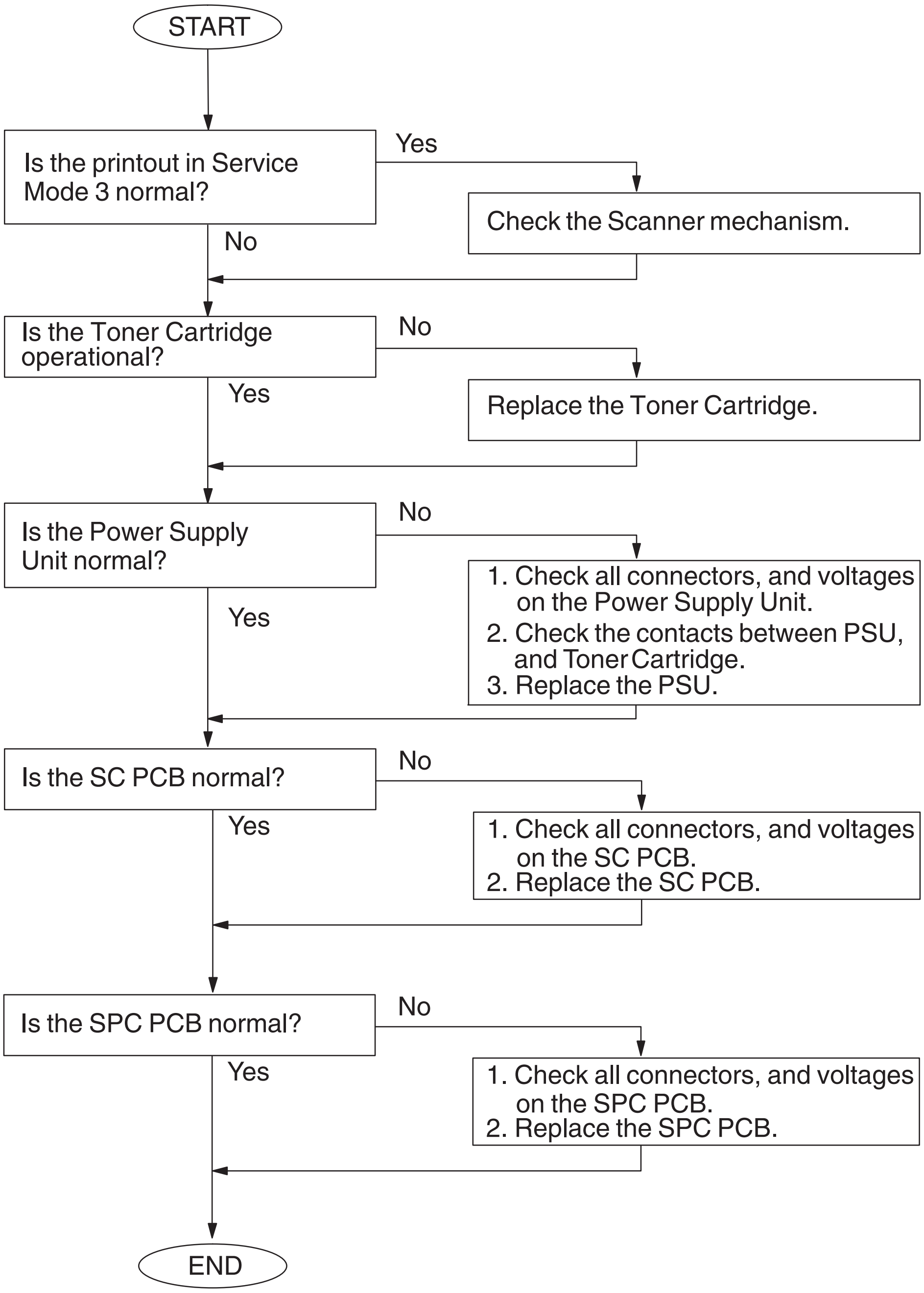

START
Check connectors on the SC PCB, and PNL PCB.
Is LED/LCD displayed?
Yes
No
Does the display appear normal?
Yes
No
Does CNP501, pin 11 on the SC PCB measure +5 VDC?
Yes
No
Replace the SC PCB.
Replace the LCD Module.
No
Replace the Panel.
Is the trouble resolved?
No
Replace the Low Voltage Power Supply Unit.
Yes
END
Is the trouble resolved?
Yes
END

- **LCD Contrast Adjustment**
  1. Press the **“FUNCTION”**, **“7”** keys.
  2. Select **“8: MAINTENANCE?”**, and press the **“Set“** key to enter the Maintenance mode.
  3. Select **“6: LCD BRIGHTNESS?”**, and press the **“Set“** key.
  4. Press the “**◀ (Lighter)**” key or “**▶ (Darker)**” key.
  5. Press the **“Set”** key or the **“Stop”** key.

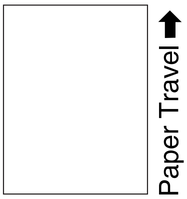
4.3. Printed Copy Quality Problems

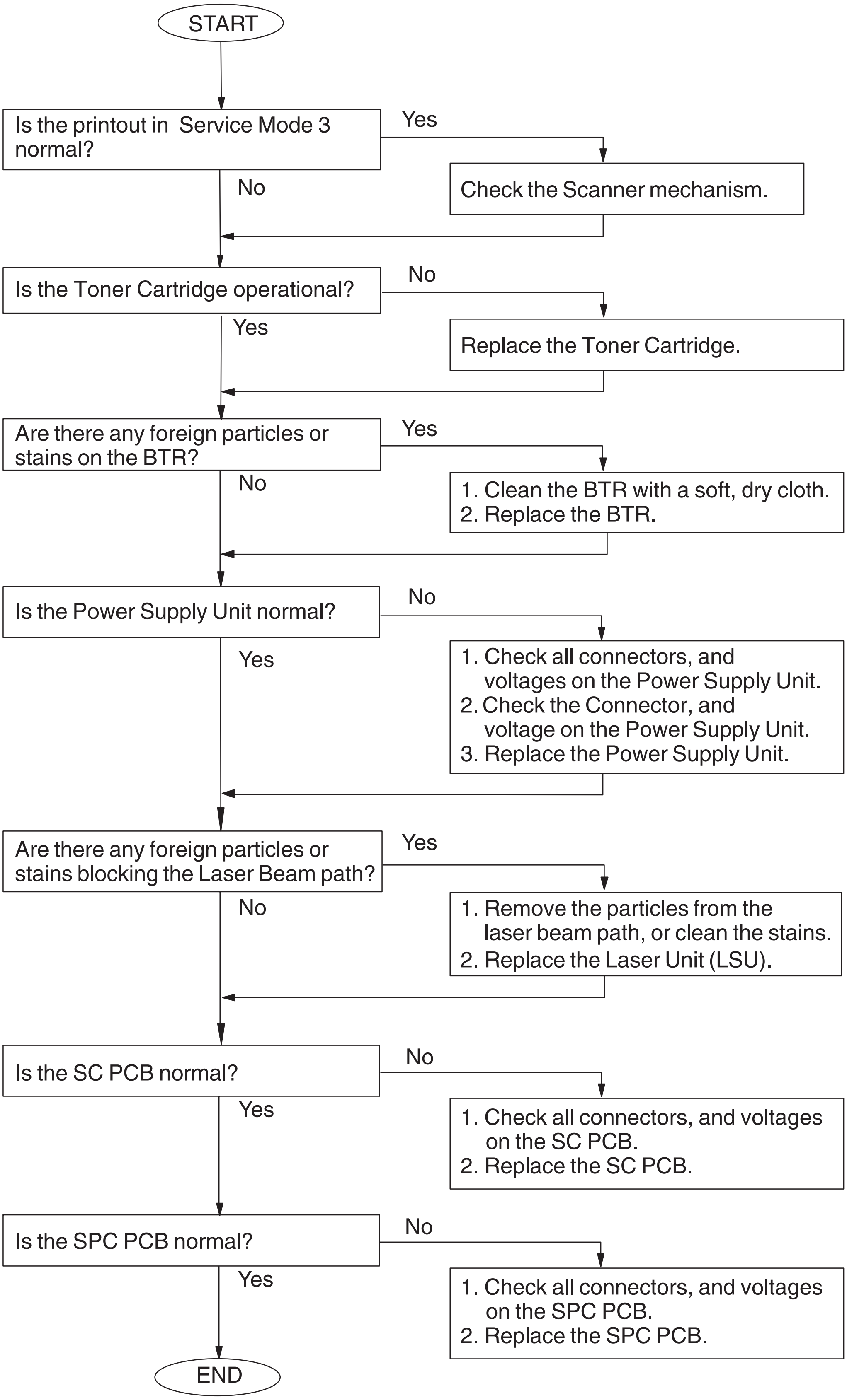
4.3.1. Black Copy


Paper Travel

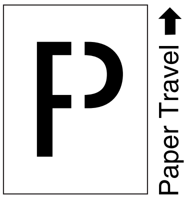

START
Is the printout in Service Mode 3 normal?
Yes
Check the Scanner mechanism.
No
Is the Toner Cartridge operational?
No
Replace the Toner Cartridge.
Yes
Is the Power Supply Unit normal?
No
1. Check all connectors, and voltages on the Power Supply Unit.
2. Check the contacts between PSU, and Toner Cartridge.
3. Replace the PSU.
Yes
Is the SC PCB normal?
No
1. Check all connectors, and voltages on the SC PCB.
2. Replace the SC PCB.
Yes
Is the SPC PCB normal?
No
1. Check all connectors, and voltages on the SPC PCB.
2. Replace the SPC PCB.
Yes
END

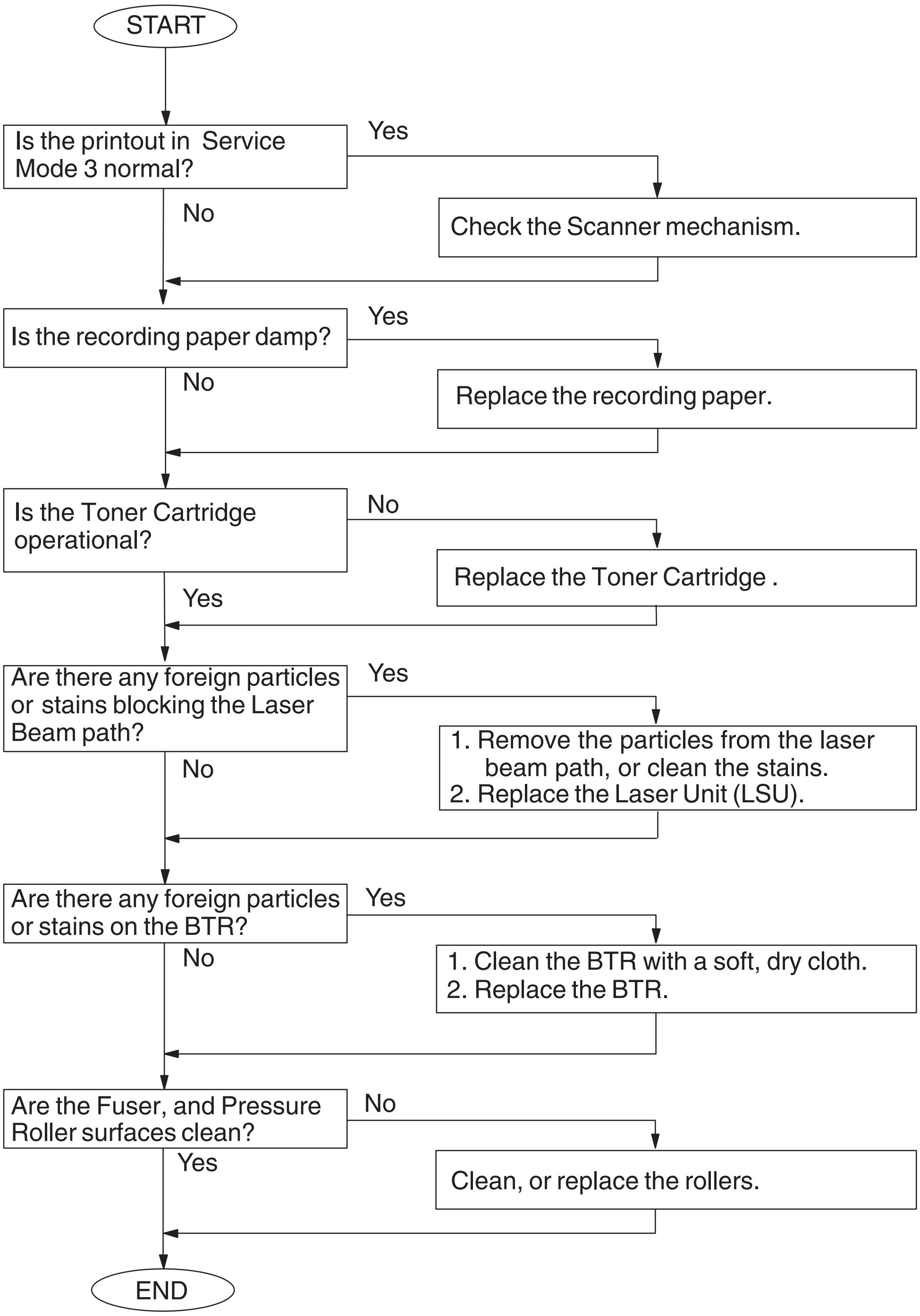
4.3.2. Blank Copy


Paper Travel

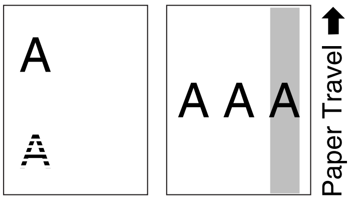

START
Is the printout in Service Mode 3 normal?
Yes
Check the Scanner mechanism.
No
Is the Toner Cartridge operational?
No
Replace the Toner Cartridge.
Yes
Are there any foreign particles or stains on the BTR?
Yes
1. Clean the BTR with a soft, dry cloth.
2. Replace the BTR.
No
Is the Power Supply Unit normal?
No
1. Check all connectors, and voltages on the Power Supply Unit.
2. Check the Connector, and voltage on the Power Supply Unit.
3. Replace the Power Supply Unit.
Yes
Are there any foreign particles or stains blocking the Laser Beam path?
Yes
1. Remove the particles from the laser beam path, or clean the stains.
2. Replace the Laser Unit (LSU).
No
Is the SC PCB normal?
No
1. Check all connectors, and voltages on the SC PCB.
2. Replace the SC PCB.
Yes
Is the SPC PCB normal?
No
1. Check all connectors, and voltages on the SPC PCB.
2. Replace the SPC PCB.
Yes
END

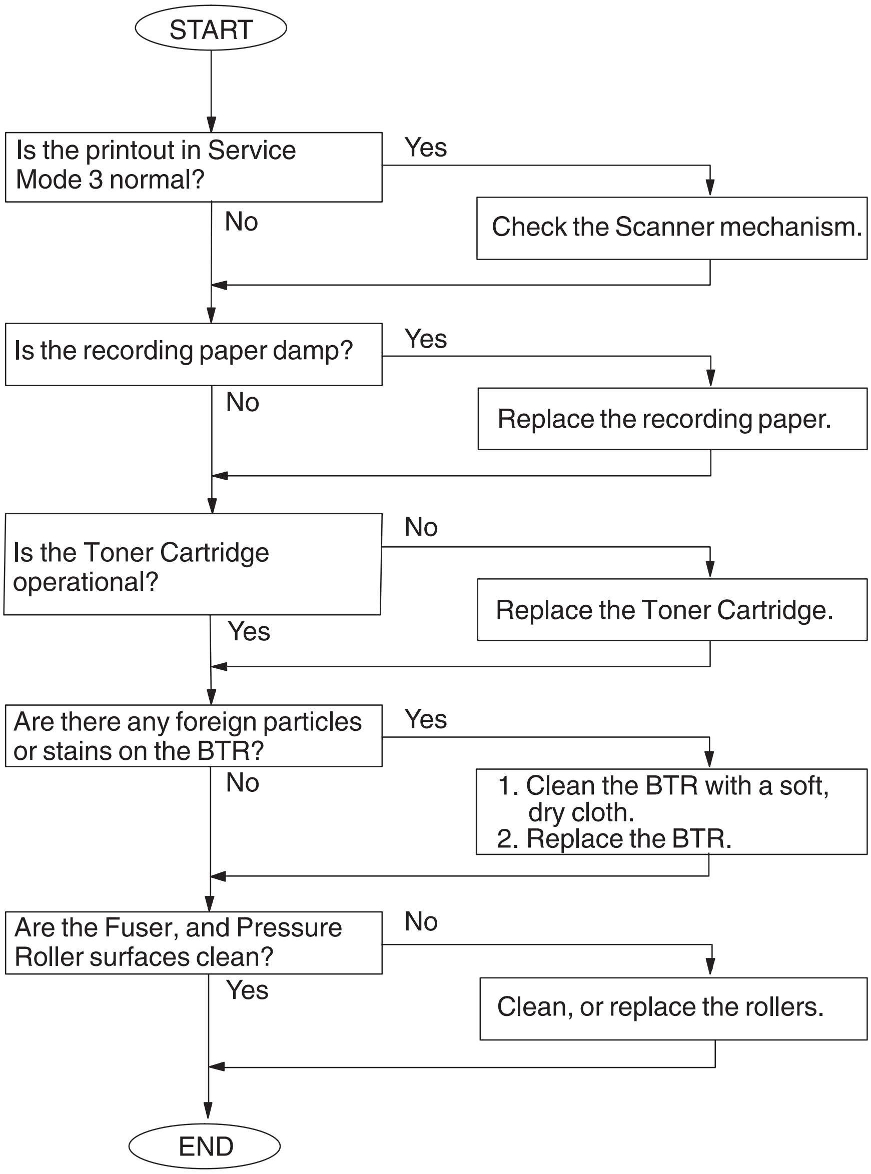
4.3.3. Vertical White Lines


Paper Travel

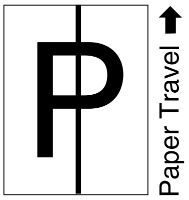

START
Is the printout in Service Mode 3 normal?
Yes
Check the Scanner mechanism.
No
Is the recording paper damp?
Yes
Replace the recording paper.
No
Is the Toner Cartridge operational?
No
Replace the Toner Cartridge .
Yes
Are there any foreign particles or stains blocking the Laser Beam path?
Yes
1. Remove the particles from the laser beam path, or clean the stains.
2. Replace the Laser Unit (LSU).
No
Are there any foreign particles or stains on the BTR?
Yes
1. Clean the BTR with a soft, dry cloth.
2. Replace the BTR.
No
Are the Fuser, and Pressure Roller surfaces clean?
No
Clean, or replace the rollers.
Yes
END

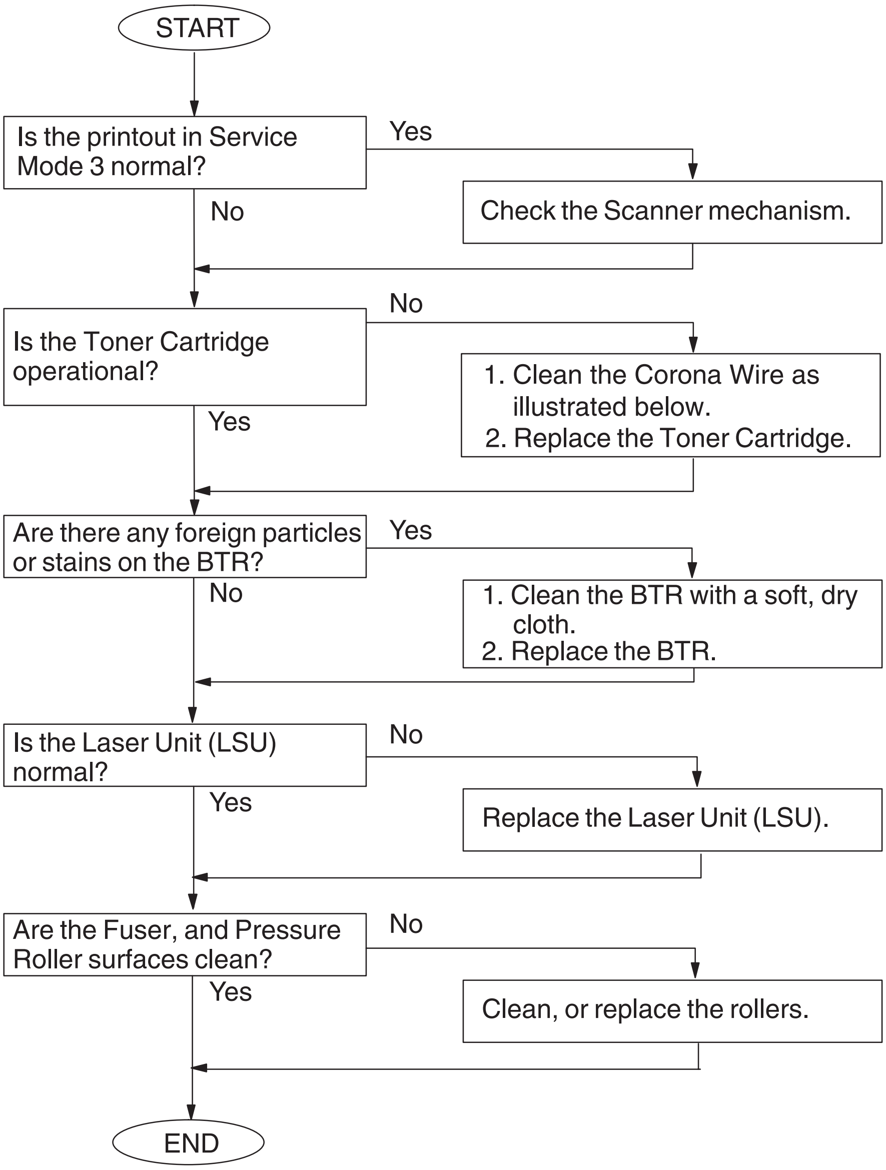
4.3.4. Ghost Images


A
A
A A A
Paper Travel

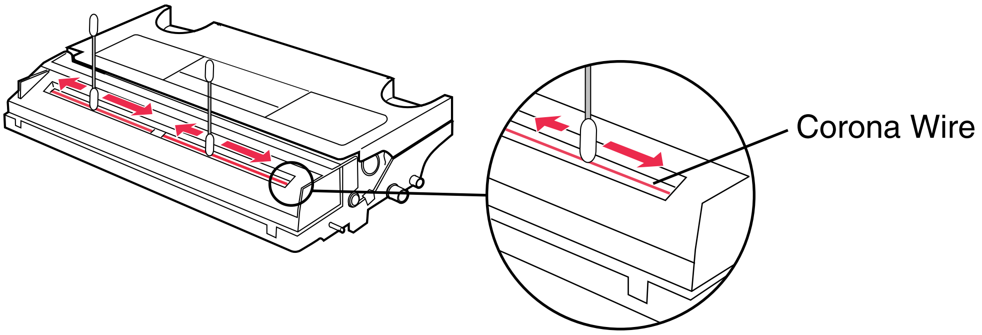

START
Is the printout in Service Mode 3 normal?
Yes
Check the Scanner mechanism.
No
Is the recording paper damp?
Yes
Replace the recording paper.
No
Is the Toner Cartridge operational?
No
Replace the Toner Cartridge.
Yes
Are there any foreign particles or stains on the BTR?
Yes
1. Clean the BTR with a soft, dry cloth.
2. Replace the BTR.
No
Are the Fuser, and Pressure Roller surfaces clean?
No
Clean, or replace the rollers.
Yes
END

4.3.5. Vertical Dark Lines

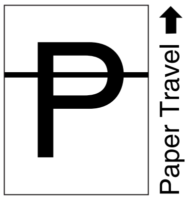

P
Paper Travel

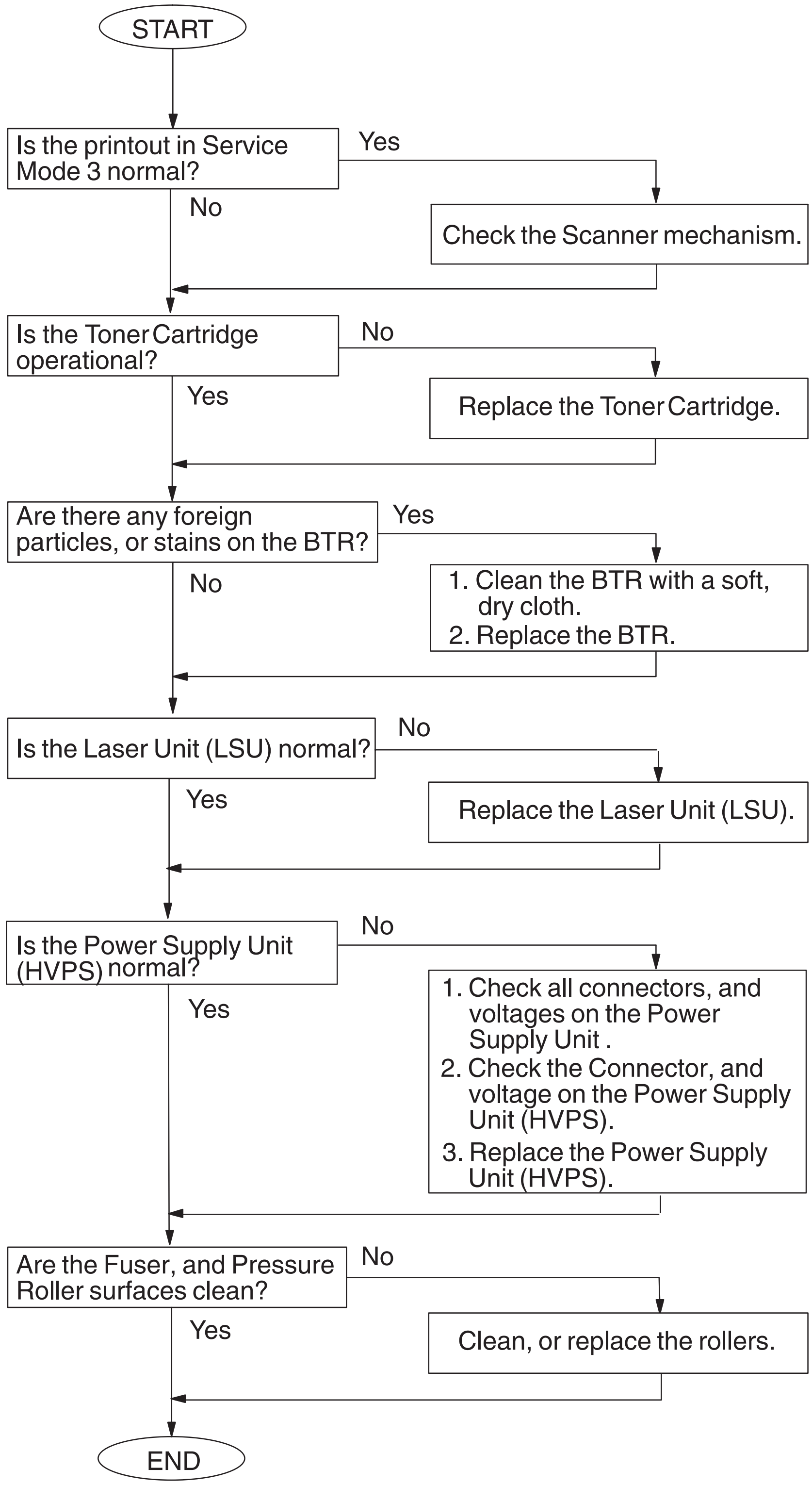

START
Is the printout in Service Mode 3 normal?
Yes
Check the Scanner mechanism.
No
Is the Toner Cartridge operational?
No
1. Clean the Corona Wire as illustrated below.
2. Replace the Toner Cartridge.
Yes
Are there any foreign particles or stains on the BTR?
Yes
1. Clean the BTR with a soft, dry cloth.
2. Replace the BTR.
No
Is the Laser Unit (LSU) normal?
No
Replace the Laser Unit (LSU).
Yes
Are the Fuser, and Pressure Roller surfaces clean?
No
Clean, or replace the rollers.
Yes
END

Carefully wipe the Corona Wire in the Toner Cartri]ge by sliding a dry Cotton Swab from end to end a few times.

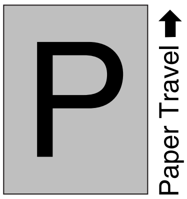

Corona Wire

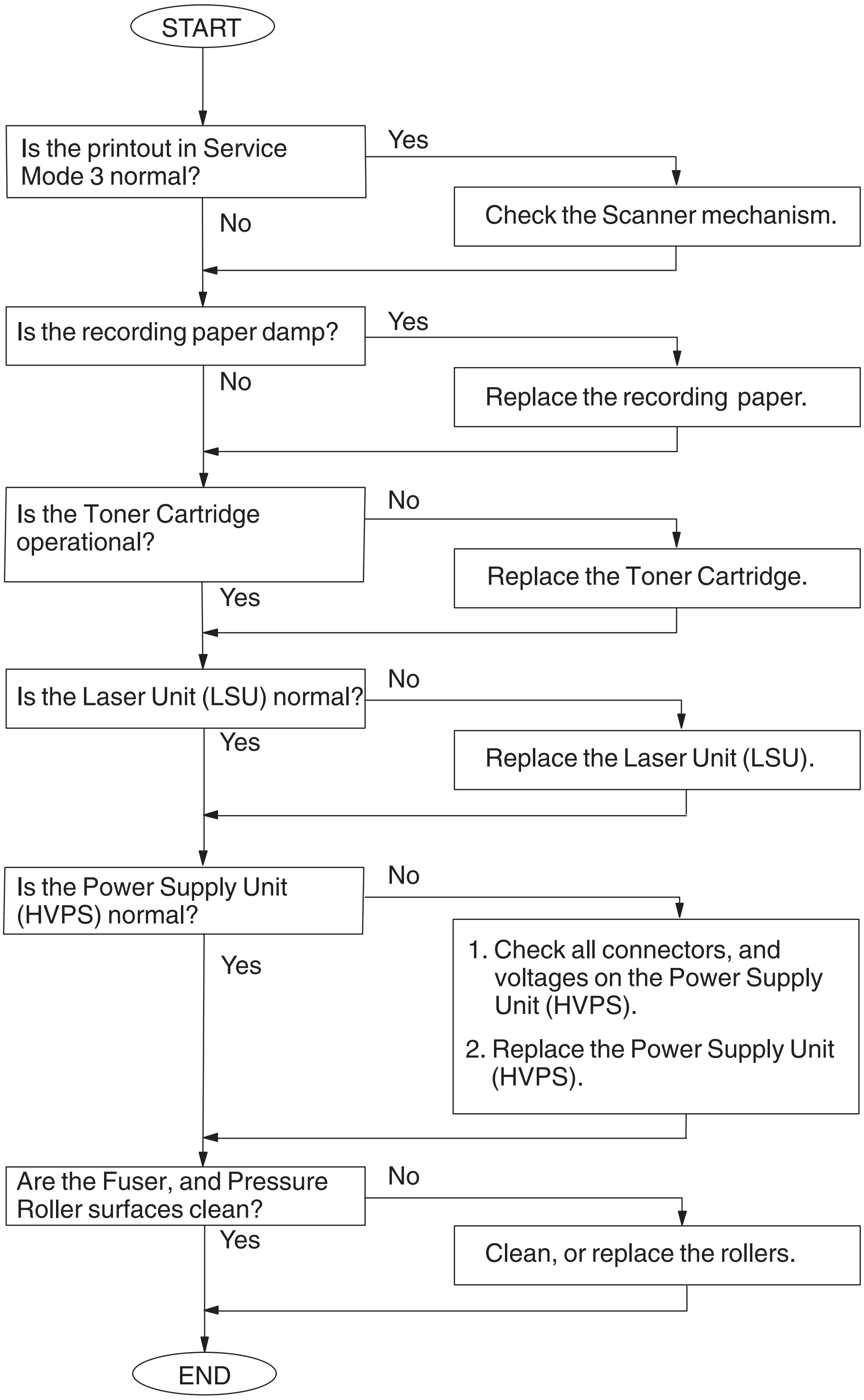
4.3.6. Horizontal Dark Lines


P
Paper Travel

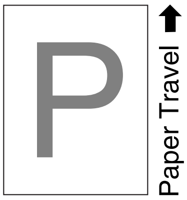

START
Is the printout in Service Mode 3 normal?
Yes
Check the Scanner mechanism.
No
Is the Toner Cartridge operational?
No
Replace the Toner Cartridge.
Yes
Are there any foreign particles, or stains on the BTR?
Yes
1. Clean the BTR with a soft, dry cloth.
2. Replace the BTR.
No
Is the Laser Unit (LSU) normal?
No
Replace the Laser Unit (LSU).
Yes
Is the Power Supply Unit (HVPS) normal?
No
1. Check all connectors, and voltages on the Power Supply Unit .
2. Check the Connector, and voltage on the Power Supply Unit (HVPS).
3. Replace the Power Supply Unit (HVPS).
Yes
Are the Fuser, and Pressure Roller surfaces clean?
No
Clean, or replace the rollers.
Yes
END

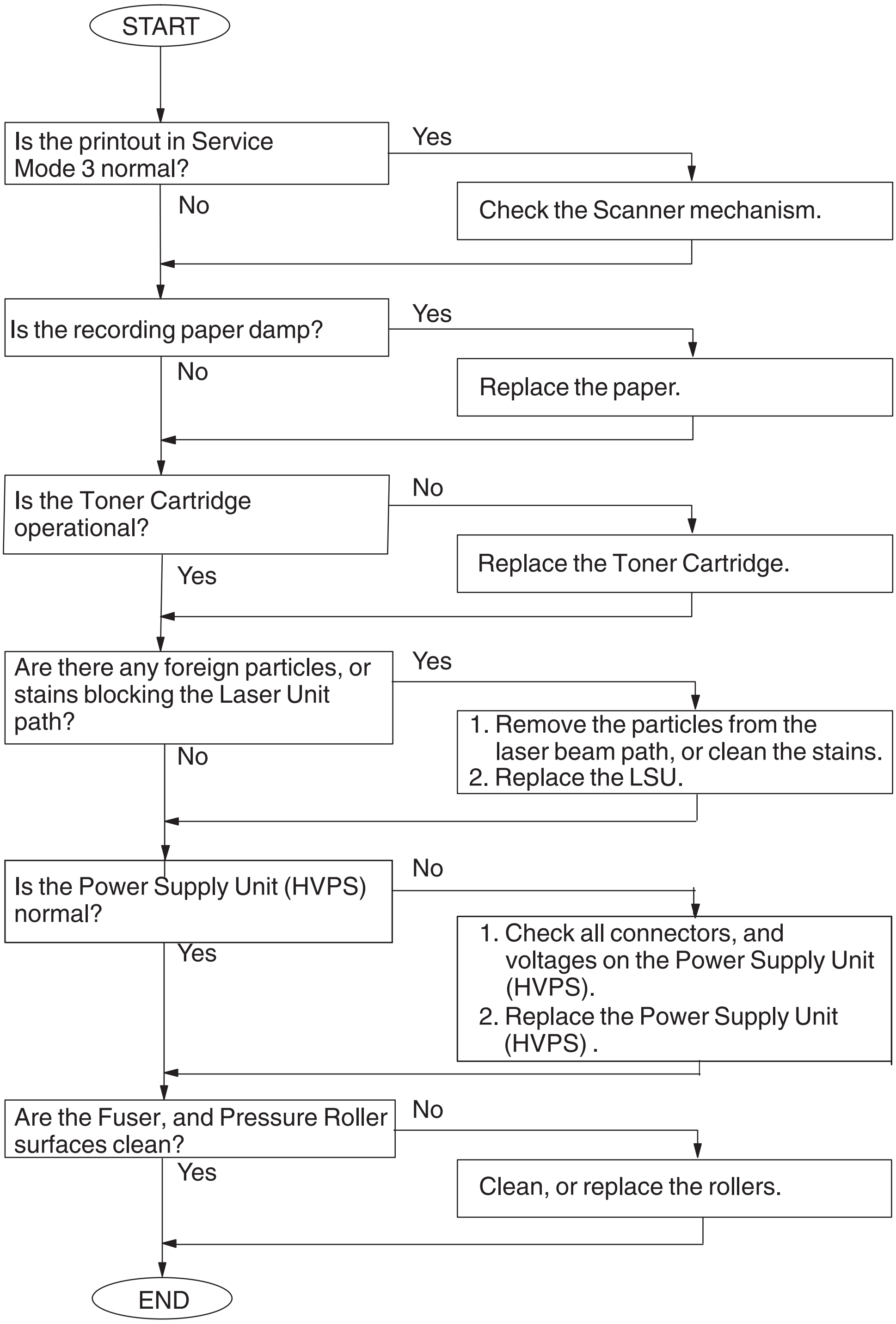
4.3.7. Dark Background


P
Paper Travel

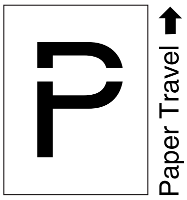

START
Is the printout in Service Mode 3 normal?
Yes
Check the Scanner mechanism.
No
Is the recording paper damp?
Yes
Replace the recording paper.
No
Is the Toner Cartridge operational?
No
Replace the Toner Cartridge.
Yes
Is the Laser Unit (LSU) normal?
No
Replace the Laser Unit (LSU).
Yes
Is the Power Supply Unit (HVPS) normal?
No
1. Check all connectors, and voltages on the Power Supply Unit (HVPS).
2. Replace the Power Supply Unit (HVPS).
Yes
Are the Fuser, and Pressure Roller surfaces clean?
No
Clean, or replace the rollers.
Yes
END

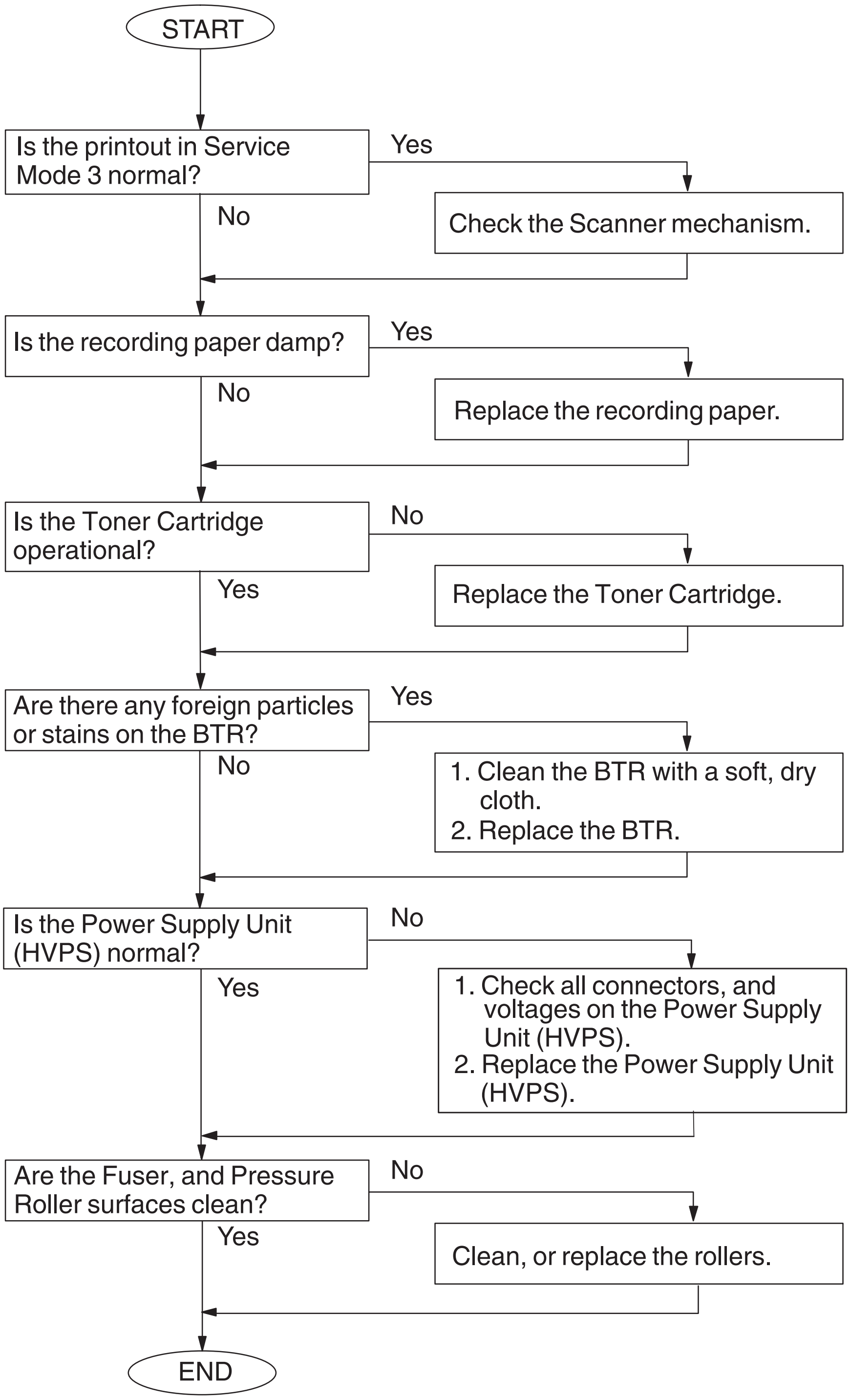
4.3.8. Light Print


P
Paper Travel

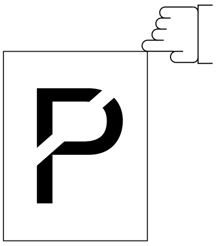

START
Is the printout in Service Mode 3 normal?
Yes
Check the Scanner mechanism.
No
Is the recording paper damp?
Yes
Replace the paper.
No
Is the Toner Cartridge operational?
No
Replace the Toner Cartridge.
Yes
Are there any foreign particles, or stains blocking the Laser Unit path?
Yes
1. Remove the particles from the laser beam path, or clean the stains.
2. Replace the LSU.
No
Is the Power Supply Unit (HVPS) normal?
No
1. Check all connectors, and voltages on the Power Supply Unit (HVPS).
2. Replace the Power Supply Unit (HVPS) .
Yes
Are the Fuser, and Pressure Roller surfaces clean?
No
Clean, or replace the rollers.
Yes
END

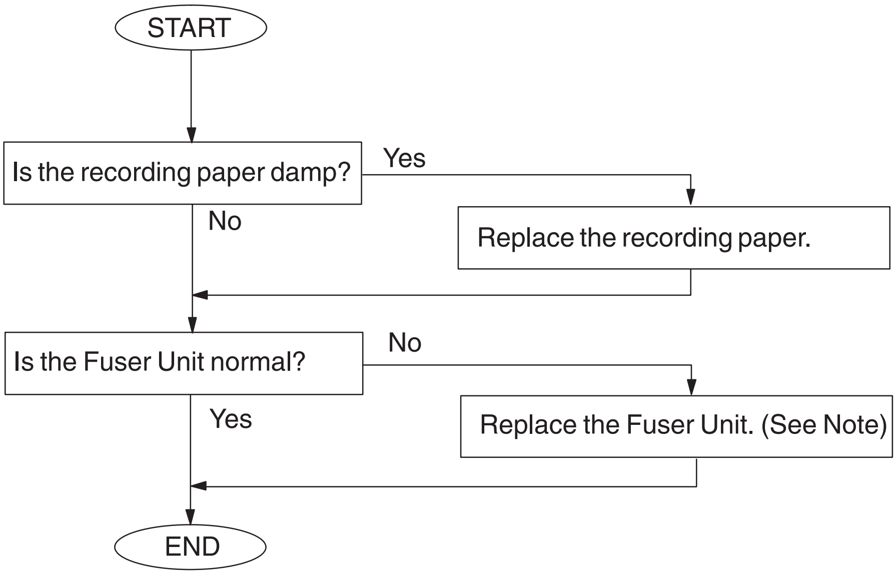
4.3.9. Horizontal White Lines


Paper Travel

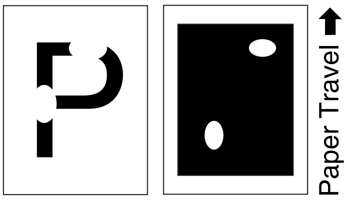

START
Is the printout in Service Mode 3 normal?
Yes
Check the Scanner mechanism.
No
Is the recording paper damp?
Yes
Replace the recording paper.
No
Is the Toner Cartridge operational?
No
Replace the Toner Cartridge.
Yes
Are there any foreign particles or stains on the BTR?
Yes
1. Clean the BTR with a soft, dry cloth.
2. Replace the BTR.
No
Is the Power Supply Unit (HVPS) normal?
No
1. Check all connectors, and voltages on the Power Supply Unit (HVPS).
2. Replace the Power Supply Unit (HVPS).
Yes
Are the Fuser, and Pressure Roller surfaces clean?
No
Clean, or replace the rollers.
Yes
END

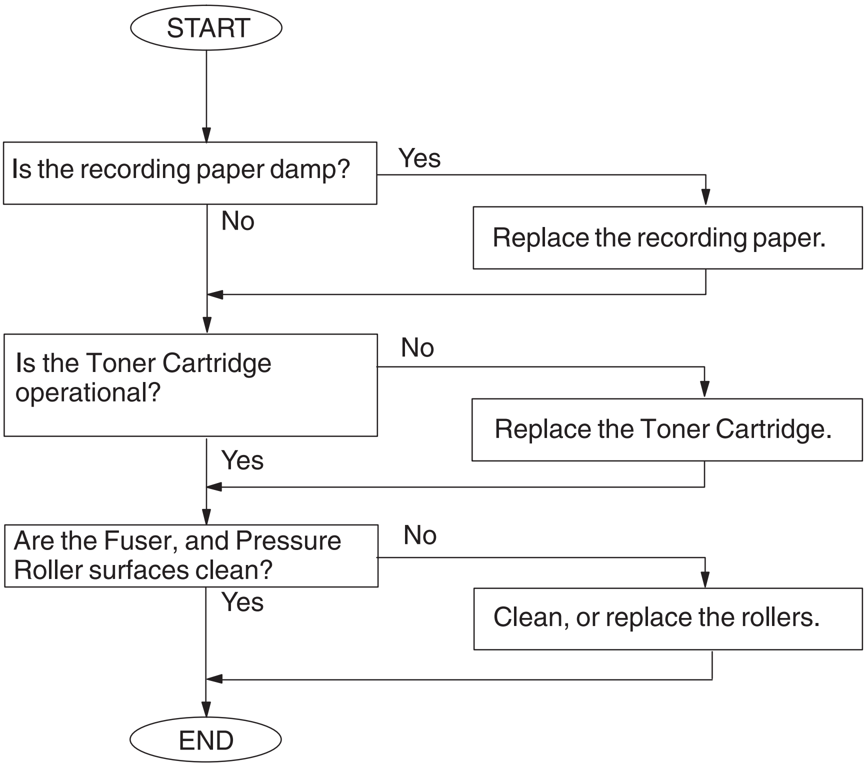
4.3.10. Improper Fusing (Printed image does not bond to the paper)



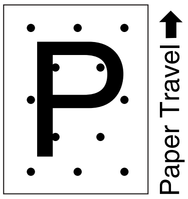

START
Is the recording paper damp?
Yes
Replace the recording paper.
No
Is the Fuser Unit normal?
No
Replace the Fuser Unit. (See Note)
Yes
END

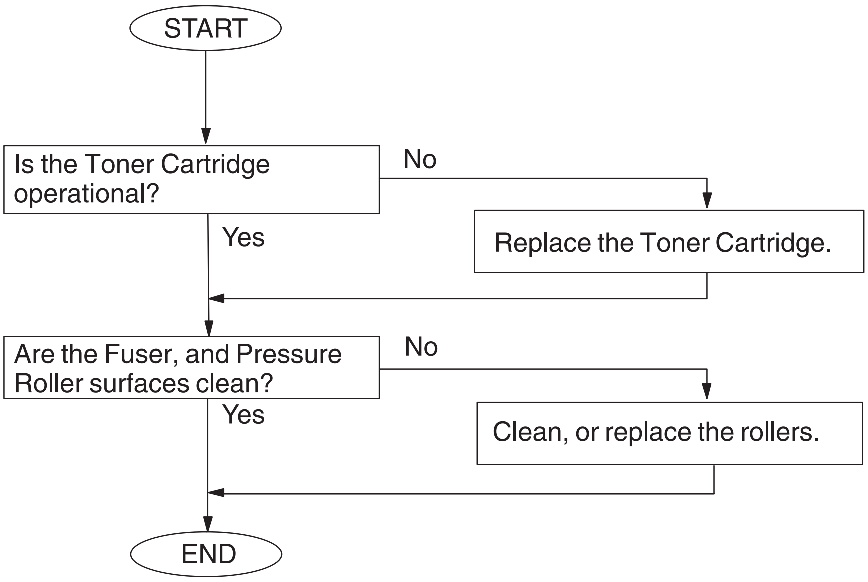
4.3.11. Voids in Solid Areas


Paper Travel

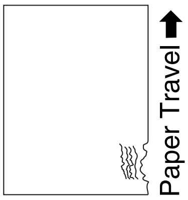

START
Is the recording paper damp?
Yes
Replace the recording paper.
No
Is the Toner Cartridge operational?
No
Replace the Toner Cartridge.
Yes
Are the Fuser, and Pressure Roller surfaces clean?
No
Clean, or replace the rollers.
Yes
END

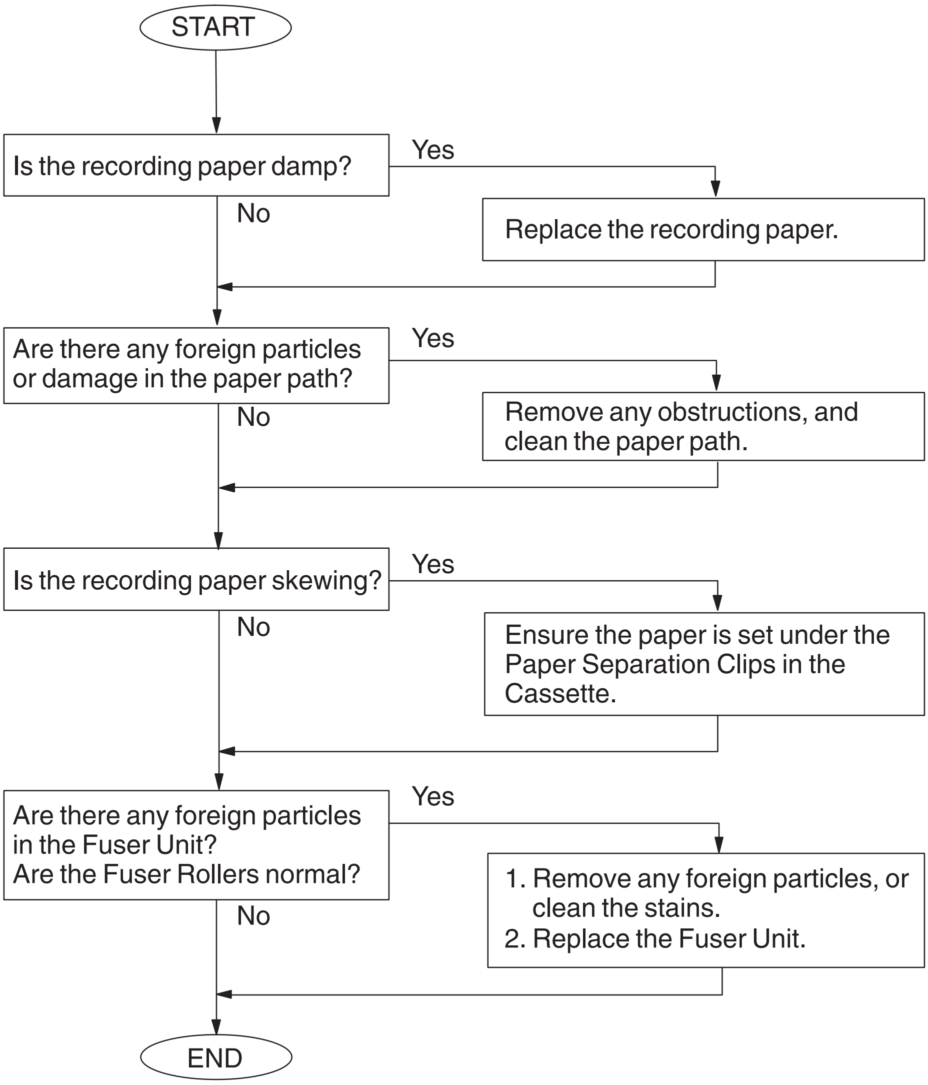
4.3.12. Black Dots


P
Paper Travel

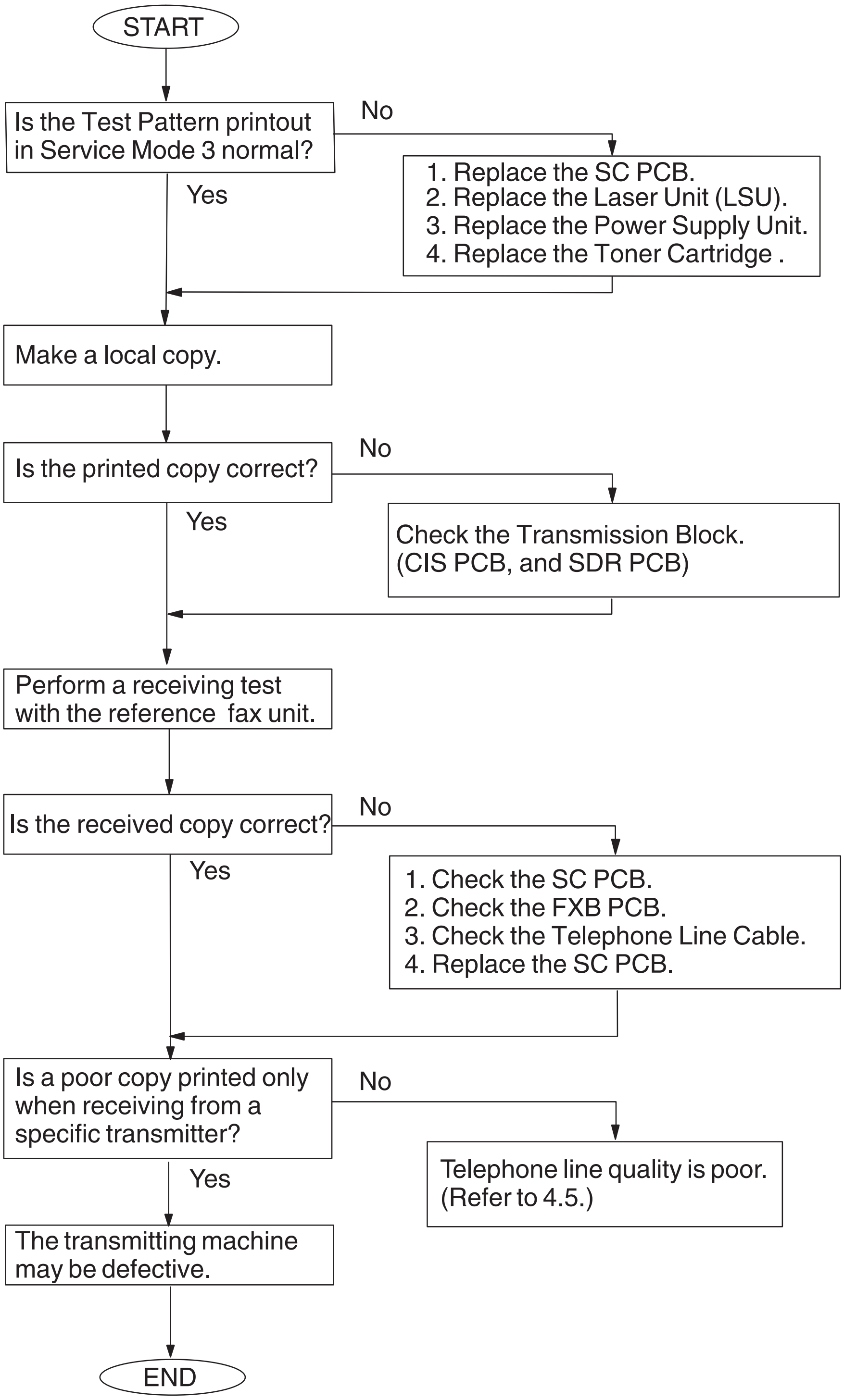

START
Is the Toner Cartridge operational?
No
Replace the Toner Cartridge.
Yes
Are the Fuser, and Pressure Roller surfaces clean?
No
Clean, or replace the rollers.
Yes
END

4.3.13. Recording Paper Creases

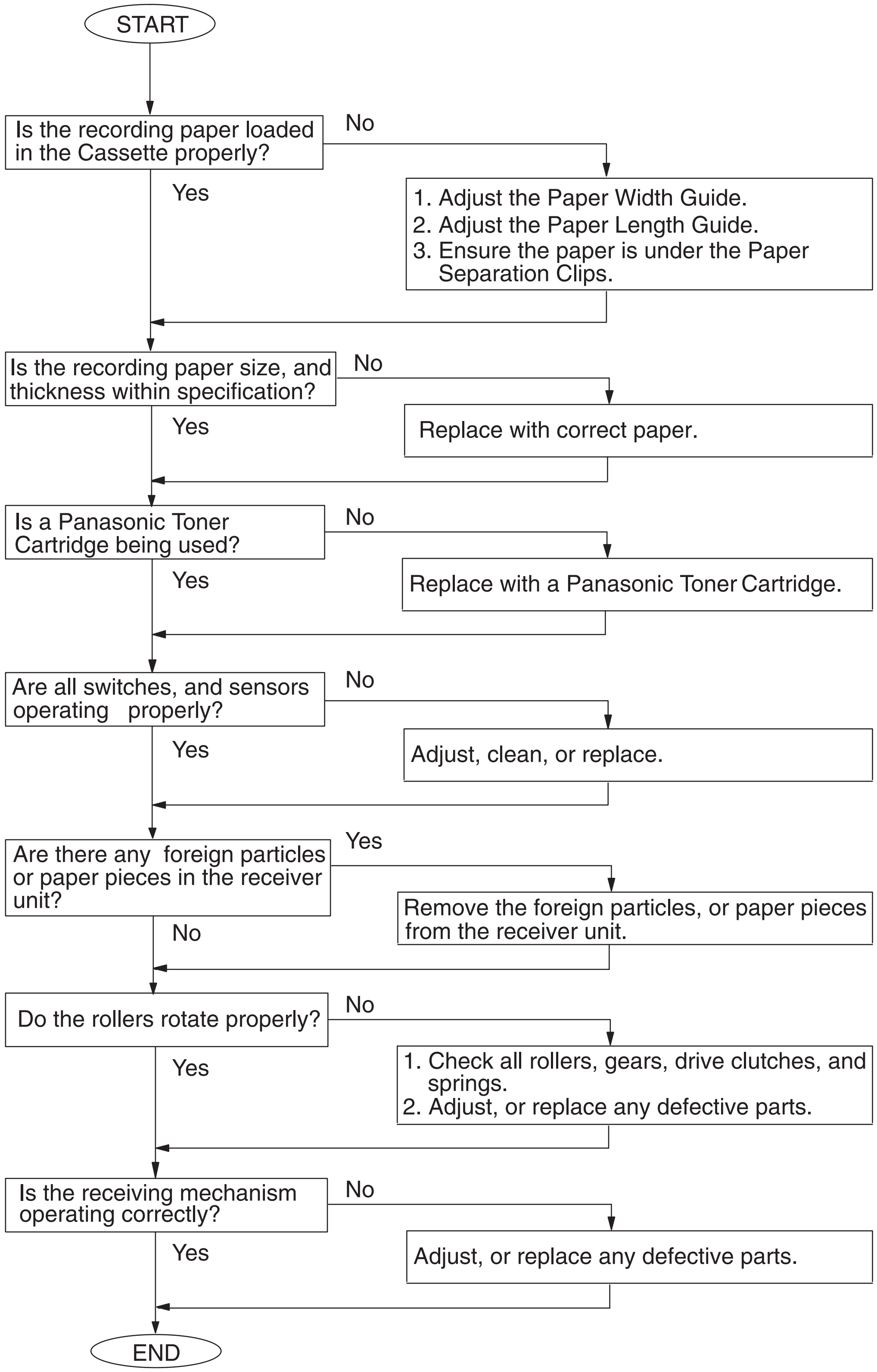

Paper Travel


START
Is the recording paper damp?
Yes
Replace the recording paper.
No
Are there any foreign particles or damage in the paper path?
Yes
Remove any obstructions, and clean the paper path.
No
Is the recording paper skewing?
Yes
Ensure the paper is set under the Paper Separation Clips in the Cassette.
No
Are there any foreign particles in the Fuser Unit? Are the Fuser Rollers normal?
Yes
1. Remove any foreign particles, or clean the stains.
2. Replace the Fuser Unit.
No
END

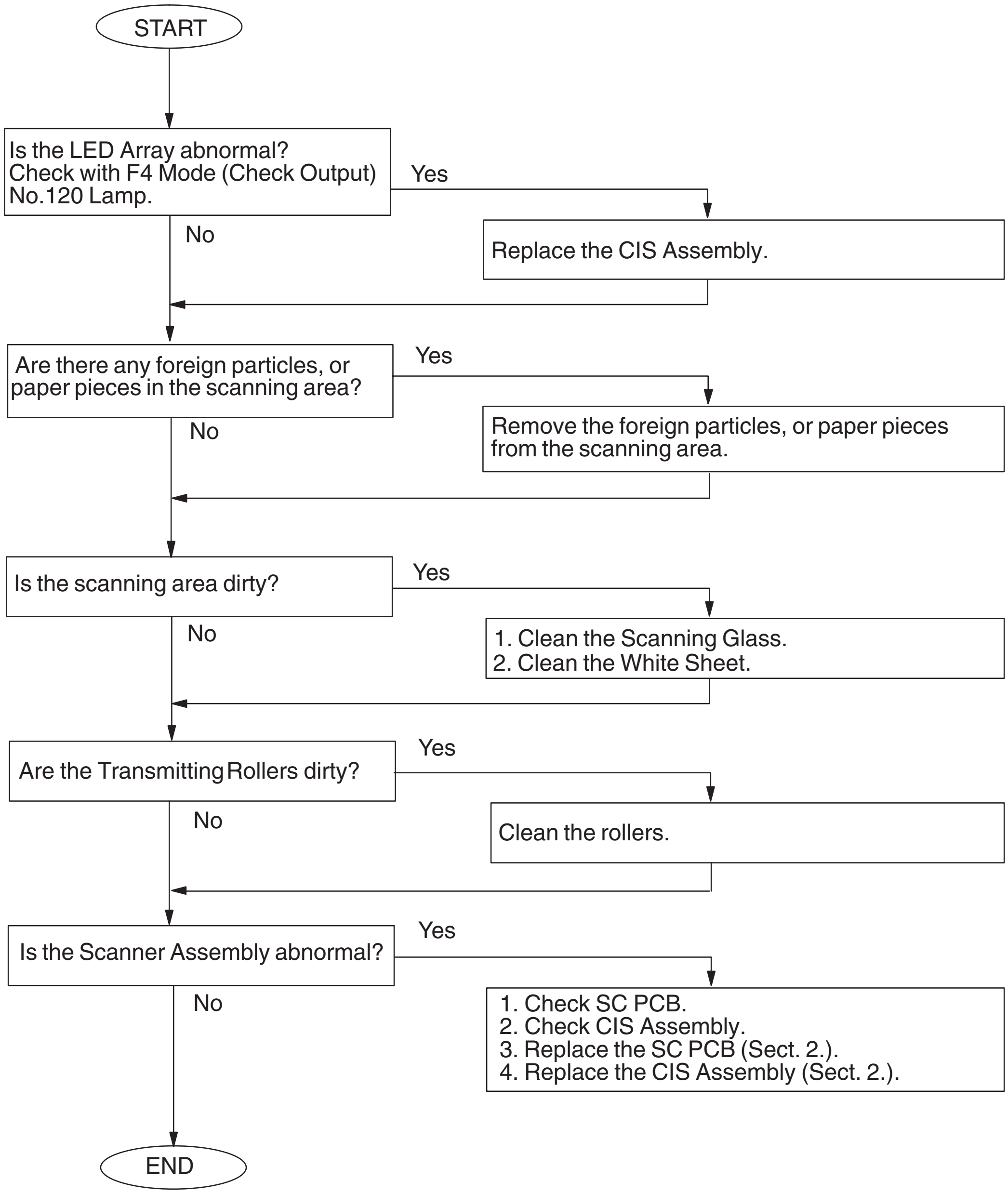
4.3.14. Poor Printed Copy Quality


START
Is the Test Pattern printout in Service Mode 3 normal?
No
1. Replace the SC PCB.
2. Replace the Laser Unit (LSU).
3. Replace the Power Supply Unit.
4. Replace the Toner Cartridge .
Yes
Make a local copy.
Is the printed copy correct?
No
Check the Transmission Block. (CIS PCB, and SDR PCB)
Yes
Perform a receiving test with the reference fax unit.
Is the received copy correct?
No
1. Check the SC PCB.
2. Check the FXB PCB.
3. Check the Telephone Line Cable.
4. Replace the SC PCB.
Yes
Is a poor copy printed only when receiving from a specific transmitter?
No
Telephone line quality is poor. (Refer to 4.5.)
Yes
The transmitting machine may be defective.
END

4.3.15. Abnormal Printing

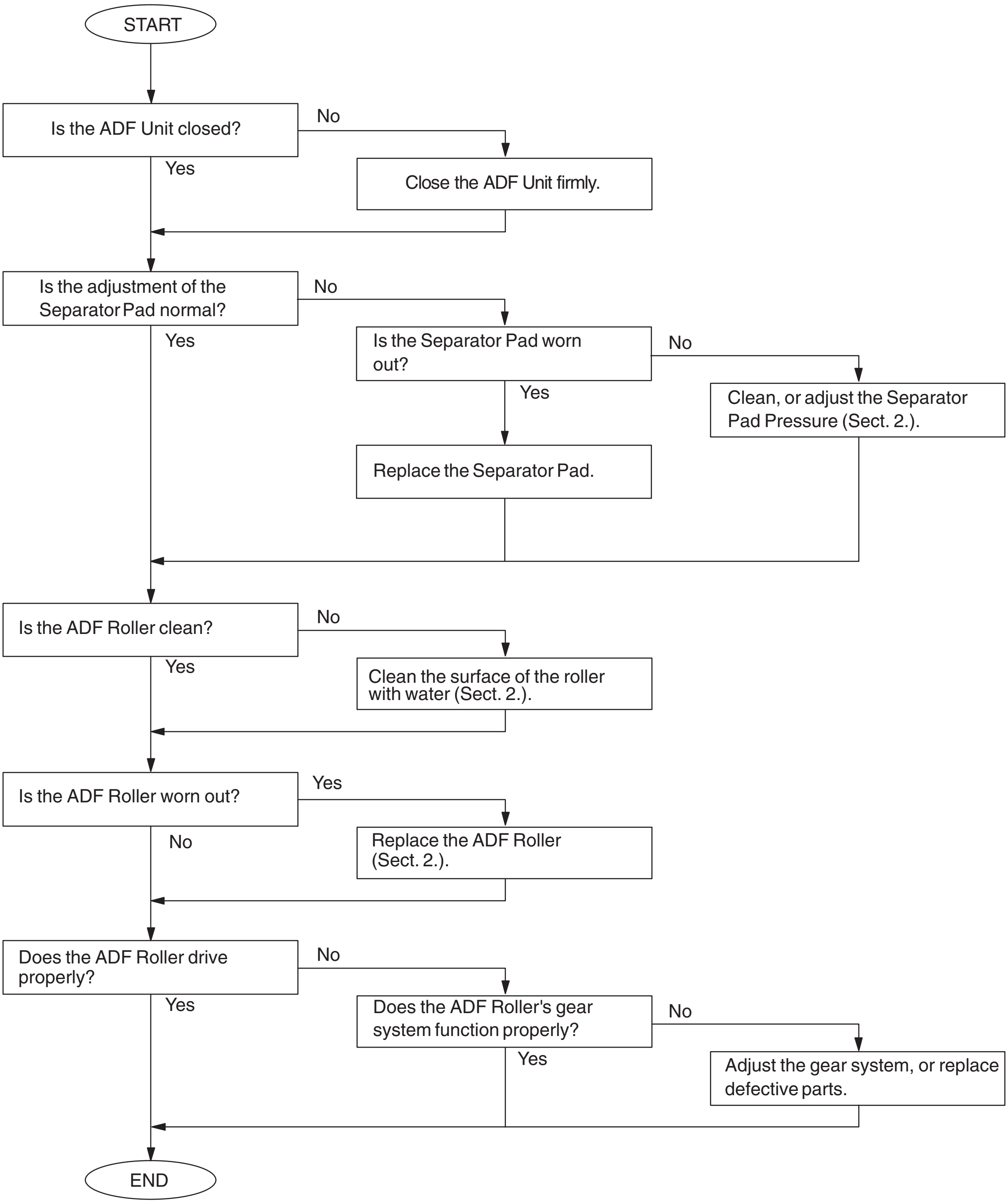

START
Is the recording paper loaded in the Cassette properly?
No
Yes
1. Adjust the Paper Width Guide.
2. Adjust the Paper Length Guide.
3. Ensure the paper is under the Paper Separation Clips.
Is the recording paper size, and thickness within specification?
No
Yes
Replace with correct paper.
Is a Panasonic Toner Cartridge being used?
No
Yes
Replace with a Panasonic Toner Cartridge.
Are all switches, and sensors operating properly?
No
Yes
Adjust, clean, or replace.
Are there any foreign particles or paper pieces in the receiver unit?
Yes
No
Remove the foreign particles, or paper pieces from the receiver unit.
Do the rollers rotate properly?
No
Yes
1. Check all rollers, gears, drive clutches, and springs.
2. Adjust, or replace any defective parts.
Is the receiving mechanism operating correctly?
No
Yes
Adjust, or replace any defective parts.
END

4.3.16. Scanned Copy Quality Problems

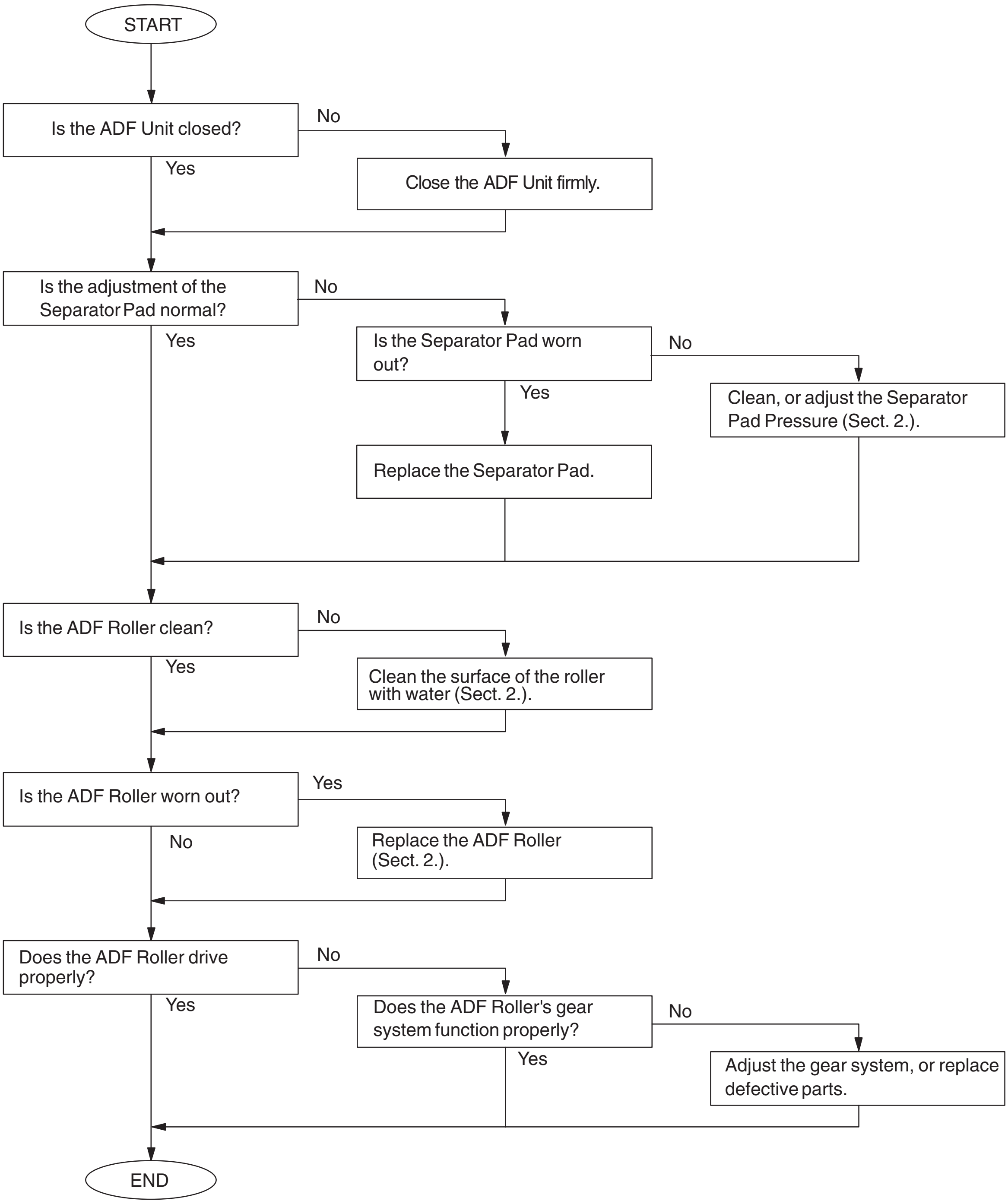

START
Is the LED Array abnormal?
Check with F4 Mode (Check Output)
No.120 Lamp.
Yes
Replace the CIS Assembly.
No
Are there any foreign particles, or paper pieces in the scanning area?
Yes
Remove the foreign particles, or paper pieces from the scanning area.
No
Is the scanning area dirty?
Yes
1. Clean the Scanning Glass.
2. Clean the White Sheet.
No
Are the Transmitting Rollers dirty?
Yes
Clean the rollers.
No
Is the Scanner Assembly abnormal?
Yes
1. Check SC PCB.
2. Check CIS Assembly.
3. Replace the SC PCB (Sect. 2.).
4. Replace the CIS Assembly (Sect. 2.).
No
END

4.4. Document Feeder (ADF)

4.4.1. No Document Feed

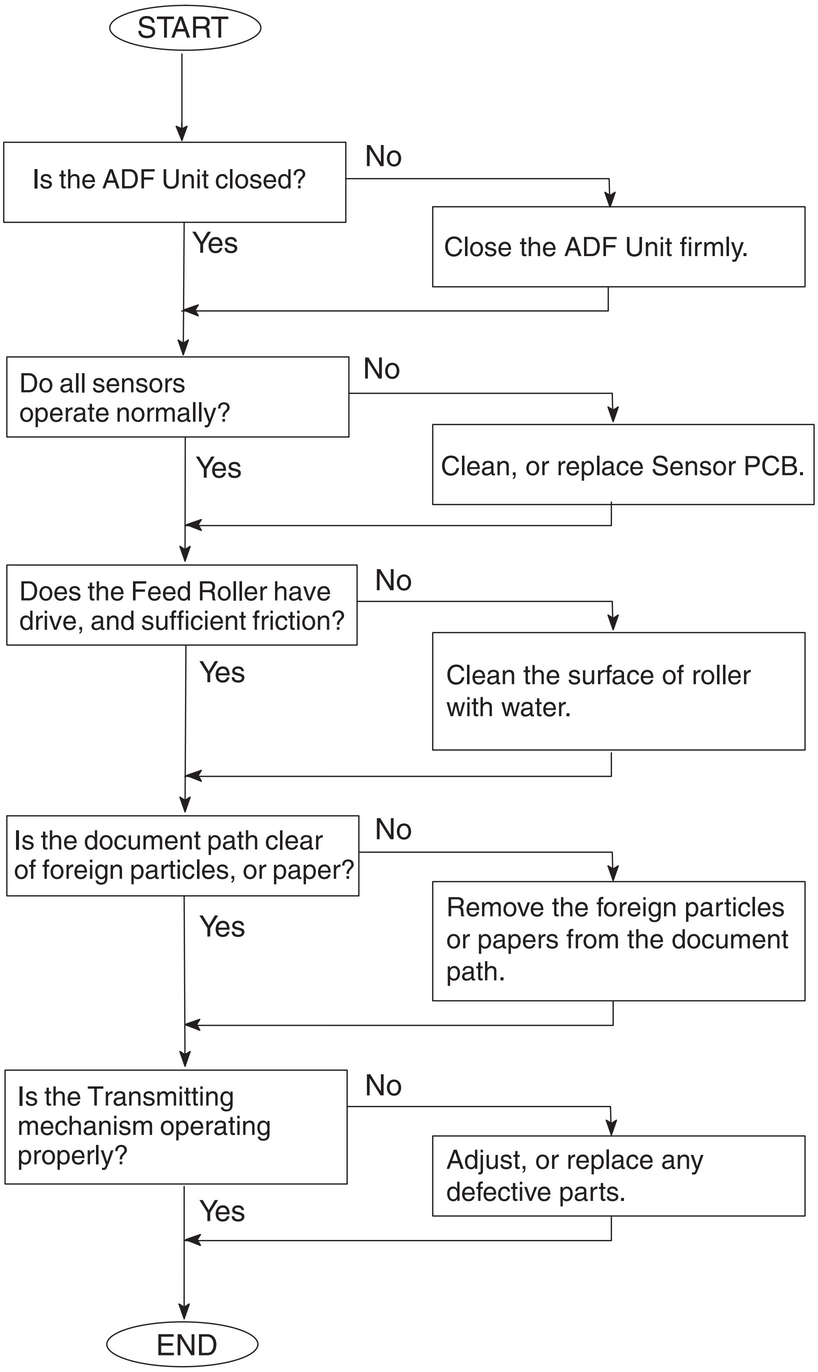

START
Is the ADF Unit closed?
No
Close the ADF Unit firmly.
Yes
Is the adjustment of the Separator Pad normal?
No
Is the Separator Pad worn out?
No
Clean, or adjust the Separator Pad Pressure (Sect. 2.).
Yes
Replace the Separator Pad.
Yes
Is the ADF Roller clean?
No
Clean the surface of the roller with water (Sect. 2.).
Yes
Is the ADF Roller worn out?
Yes
Replace the ADF Roller (Sect. 2.).
No
Does the ADF Roller drive properly?
No
Does the ADF Roller's gear system function properly?
No
Adjust the gear system, or replace defective parts.
Yes
Yes
END

4.4.2. Document Does Not Feed or Multiple Feeds


START
Is the ADF Unit closed?
No
Yes
Close the ADF Unit firmly.
Is the adjustment of the Separator Pad normal?
No
Yes
Is the Separator Pad worn out?
No
Yes
Clean, or adjust the Separator Pad Pressure (Sect. 2.).
Replace the Separator Pad.
Is the ADF Roller clean?
No
Yes
Clean the surface of the roller with water (Sect. 2.).
Is the ADF Roller worn out?
Yes
No
Replace the ADF Roller (Sect. 2.).
Does the ADF Roller drive properly?
No
Yes
Does the ADF Roller's gear system function properly?
No
Yes
Adjust the gear system, or replace defective parts.
END

4.4.3. Document Jam (030) or Skew

Copy Mode
Sample

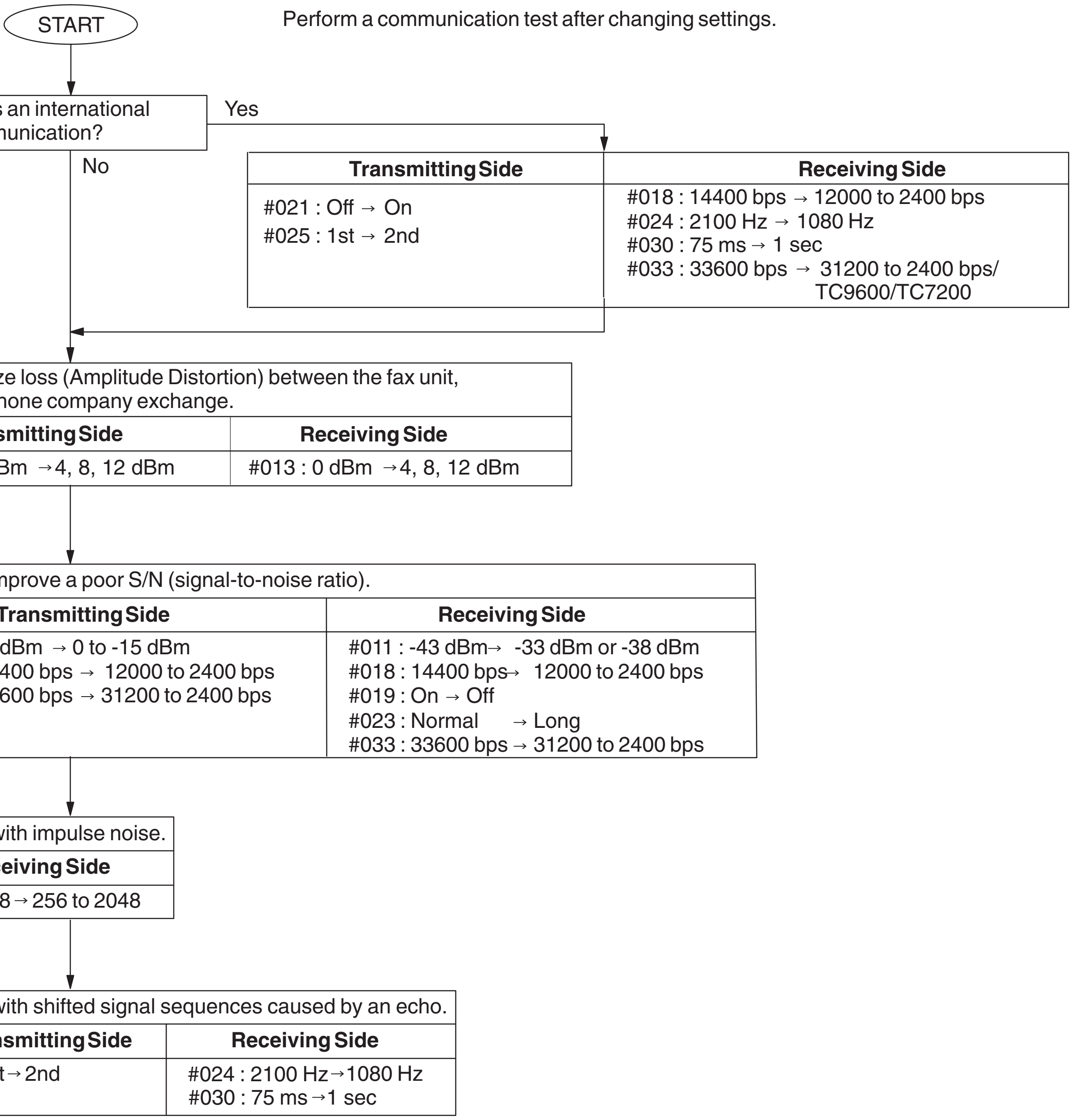

START
Is the ADF Unit closed?
No
Close the ADF Unit firmly.
Yes
Do all sensors operate normally?
No
Clean, or replace Sensor PCB.
Yes
Does the Feed Roller have drive, and sufficient friction?
No
Clean the surface of roller with water.
Yes
Is the document path clear of foreign particles, or paper?
No
Remove the foreign particles or papers from the document path.
Yes
Is the Transmitting mechanism operating properly?
No
Adjust, or replace any defective parts.
Yes
END

4.5. Communications

This section explains general troubleshooting procedures for the 400 series of Information Codes. These errors are primarily caused by poor telephone line quality (loss, noise, echo, etc.). This unit is furnished with Service Mode 1 to assist in troubleshooting line quality problems.
It is suggested that both the transmitting unit and receiving unit be adjusted. This section gives relevant parameters in Service Mode 1 for the transmitting and receiving sides. If no improvement is realized after the parameters are adjusted, it is recommended that the parameters be returned to the default settings.

4.5.1. Communication Trouble

Perform a communication test after changing settings.



Transmitting Side	Receiving Side
#021 : Off → On #025 : 1st → 2nd	#018 : 14400 bps → 12000 to 2400 bps #024 : 2100 Hz → 1080 Hz #030 : 75 ms → 1 sec #033 : 33600 bps → 31200 to 2400 bps/ TC9600/TC7200

To equalize loss (Amplitude Distortion) between the fax unit, and the phone company exchange.

Transmitting Side	Receiving Side
#014 : 0 dBm →4, 8, 12 dBm	#013 : 0 dBm →4, 8, 12 dBm

To improve a poor S/N (signal-to-noise ratio).

Transmitting Side	Receiving Side
#010 : -9 dBm → 0 to -15 dBm #017 : 14400 bps → 12000 to 2400 bps #033 : 33600 bps → 31200 to 2400 bps	#011 : -43 dBm→ -33 dBm or -38 dBm #018 : 14400 bps→ 12000 to 2400 bps #019 : On → Off #023 : Normal → Long #033 : 33600 bps → 31200 to 2400 bps

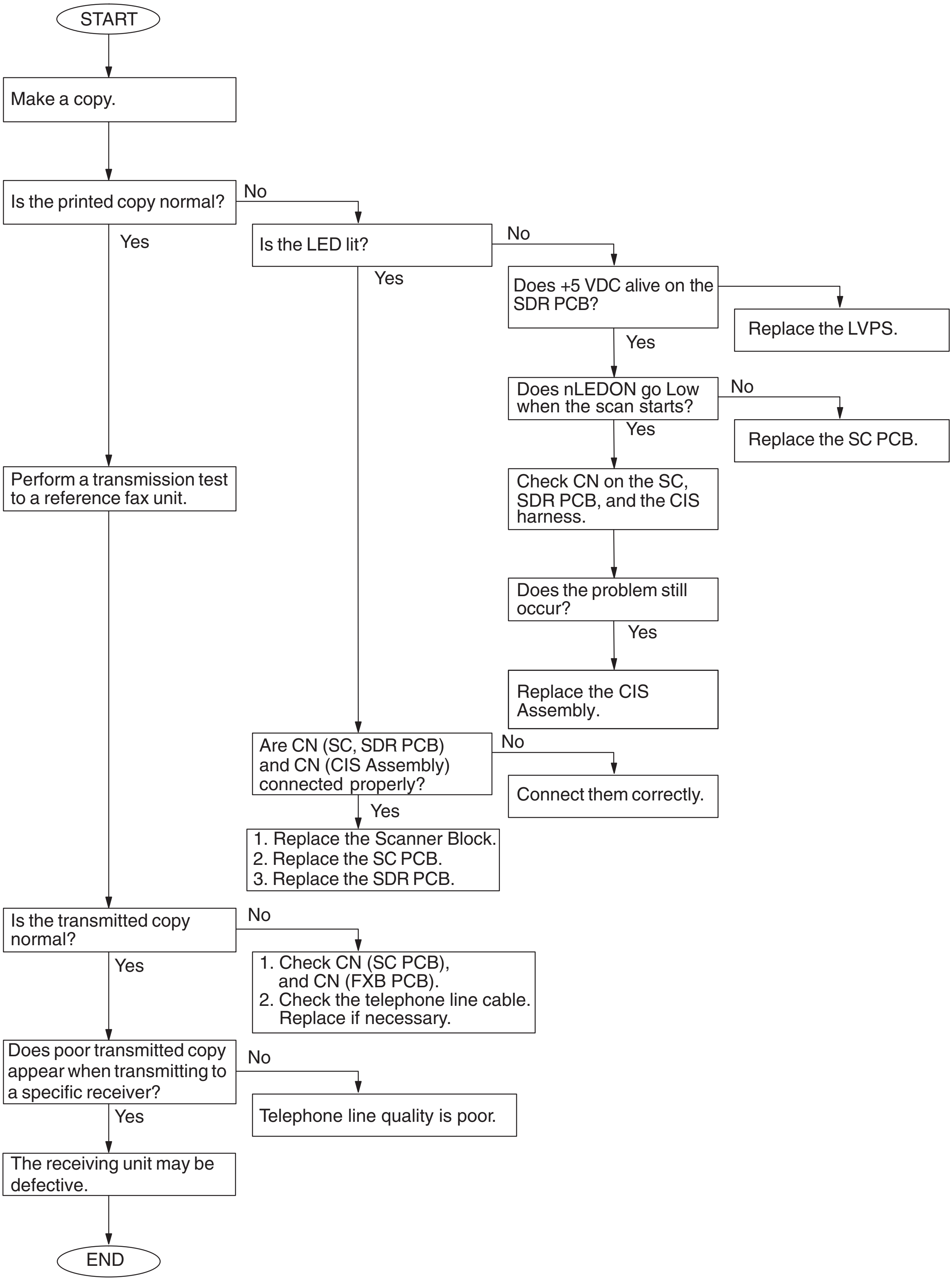
To cope with impulse noise.

Receiving Side
#070 : 128→256 to 2048

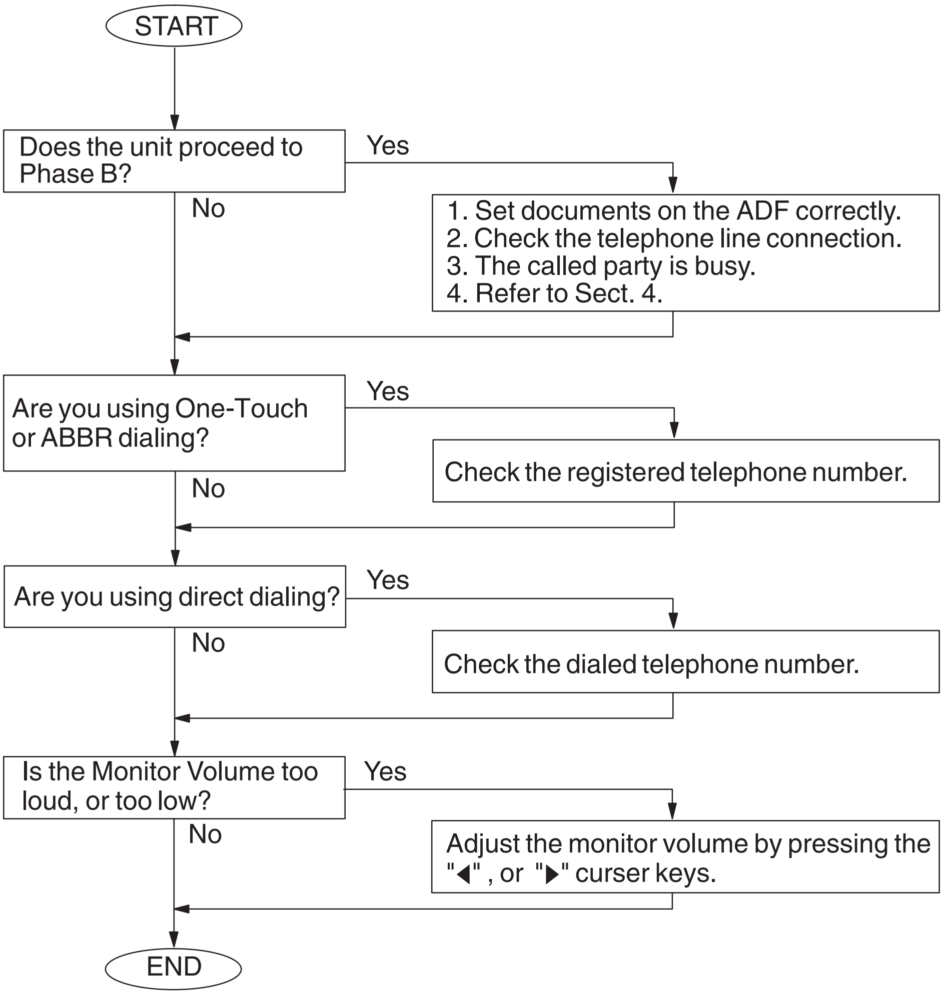
To cope with shifted signal sequences caused by an echo.

Transmitting Side	Receiving Side
#025 : 1st→2nd	#024 : 2100 Hz→1080 Hz #030 : 75 ms→1 sec

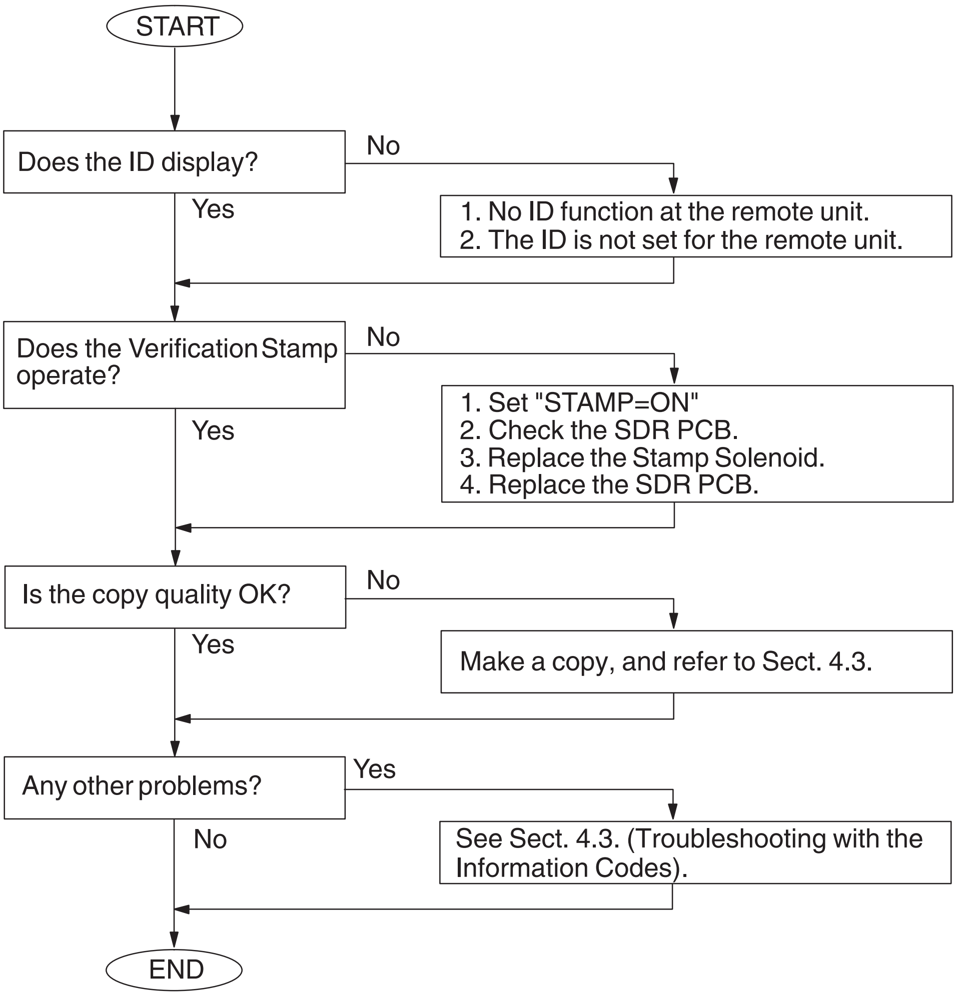
4.5.2. Poor Transmitted Copy Quality


START
Make a copy.
Is the printed copy normal?
No
Yes
Is the LED lit?
No
Yes
Does +5 VDC alive on the SDR PCB?
Replace the LVPS.
Yes
Does nLEDON go Low when the scan starts?
No
Replace the SC PCB.
Yes
Check CN on the SC, SDR PCB, and the CIS harness.
Does the problem still occur?
Yes
Replace the CIS Assembly.
Perform a transmission test to a reference fax unit.
Are CN (SC, SDR PCB) and CN (CIS Assembly) connected properly?
No
Connect them correctly.
Yes
1. Replace the Scanner Block.
2. Replace the SC PCB.
3. Replace the SDR PCB.
Is the transmitted copy normal?
No
1. Check CN (SC PCB), and CN (FXB PCB).
2. Check the telephone line cable. Replace if necessary.
Yes
Does poor transmitted copy appear when transmitting to a specific receiver?
No
Telephone line quality is poor.
Yes
The receiving unit may be defective.
END

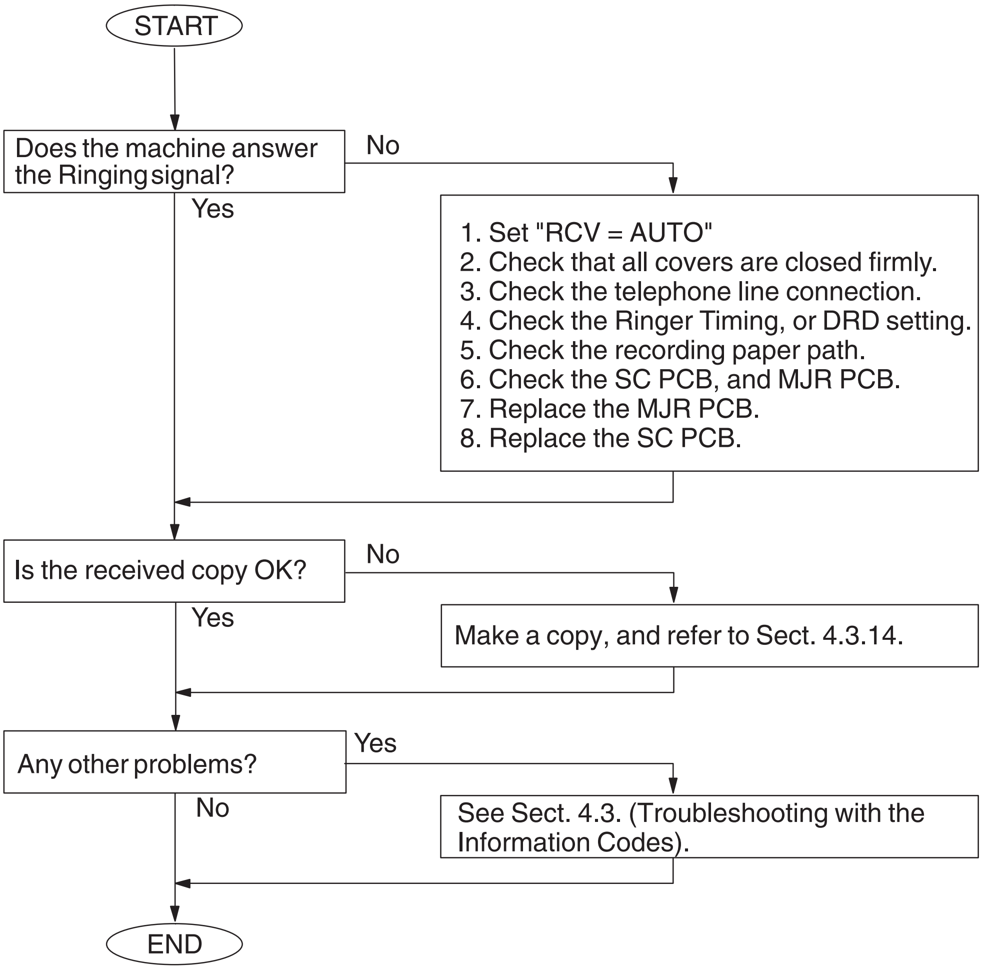
4.5.3. Dialing Problems


START
Does the unit proceed to Phase B?
Yes
No
1. Set documents on the ADF correctly.
2. Check the telephone line connection.
3. The called party is busy.
4. Refer to Sect. 4.
Are you using One-Touch or ABBR dialing?
Yes
No
Check the registered telephone number.
Are you using direct dialing?
Yes
No
Check the dialed telephone number.
Is the Monitor Volume too loud, or too low?
Yes
No
Adjust the monitor volume by pressing the "◀" , or "▶" curser keys.
END

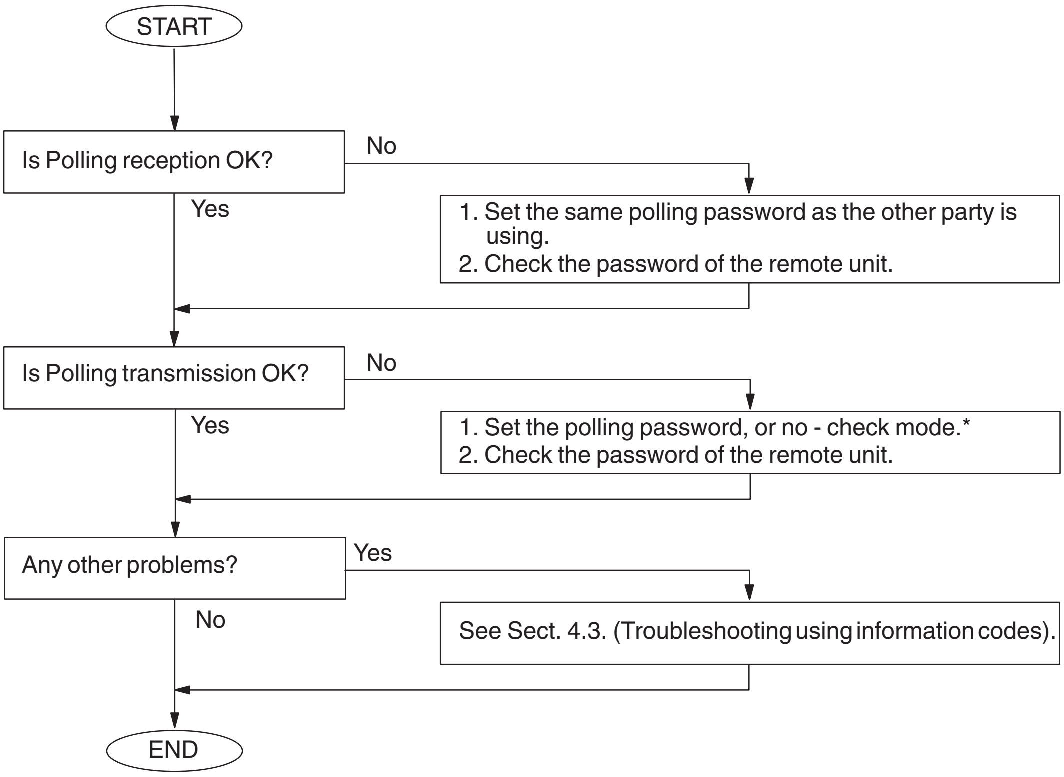
4.5.4. Transmission Problems


START
Does the ID display?
No
Yes
1. No ID function at the remote unit.
2. The ID is not set for the remote unit.
Does the Verification Stamp operate?
No
Yes
1. Set "STAMP=ON"
2. Check the SDR PCB.
3. Replace the Stamp Solenoid.
4. Replace the SDR PCB.
Is the copy quality OK?
No
Yes
Make a copy, and refer to Sect. 4.3.
Any other problems?
Yes
No
See Sect. 4.3. (Troubleshooting with the Information Codes).
END

4.5.5. Reception Problems


START
Does the machine answer the Ringing signal?
No
Yes
1. Set "RCV = AUTO"
2. Check that all covers are closed firmly.
3. Check the telephone line connection.
4. Check the Ringer Timing, or DRD setting.
5. Check the recording paper path.
6. Check the SC PCB, and MJR PCB.
7. Replace the MJR PCB.
8. Replace the SC PCB.
Is the received copy OK?
No
Yes
Make a copy, and refer to Sect. 4.3.14.
Any other problems?
Yes
No
See Sect. 4.3. (Troubleshooting with the Information Codes).
END

4.5.6. Polling Problems

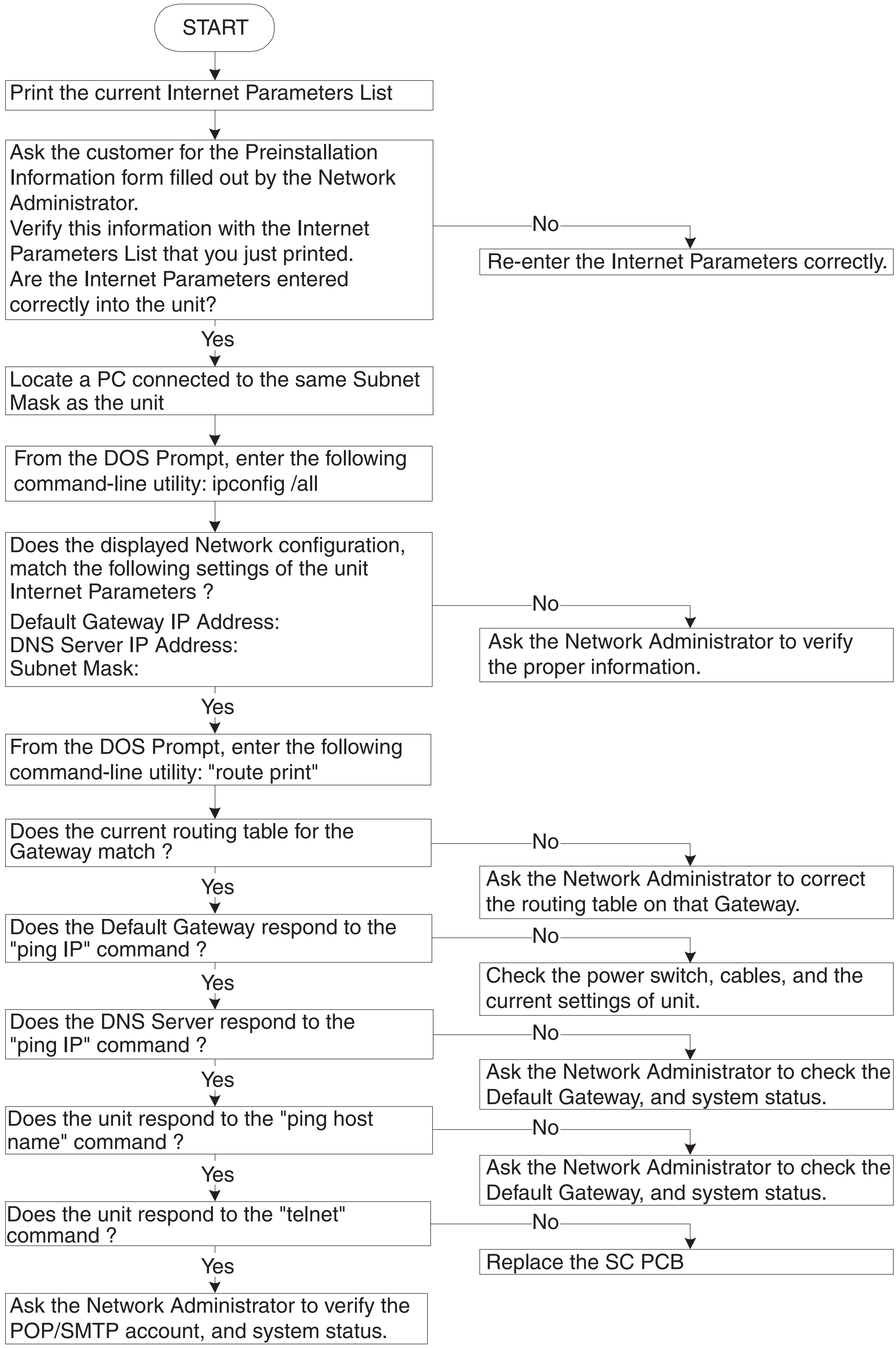

START
Is Polling reception OK?
No
Yes
1. Set the same polling password as the other party is using.
2. Check the password of the remote unit.
Is Polling transmission OK?
No
Yes
1. Set the polling password, or no - check mode.*
2. Check the password of the remote unit.
Any other problems?
Yes
No
See Sect. 4.3. (Troubleshooting using information codes).
END

Note:

No-check Mode means that password is not set.

4.6. Troubleshooting the LAN Interface

4.6.1. Checking Network Configuration



START

Print the current Internet Parameters List

Ask the customer for the Preinstallation Information form filled out by the Network Administrator. Verify this information with the Internet Parameters List that you just printed. Are the Internet Parameters entered correctly into the unit?

Re-enter the Internet Parameters correctly.

Locate a PC connected to the same Subnet Mask as the unit

From the DOS Prompt, enter the following command-line utility: ipconfig /all

Does the displayed Network configuration, match the following settings of the unit Internet Parameters ?

Default Gateway IP Address:
DNS Server IP Address:
Subnet Mask:

Ask the Network Administrator to verify the proper information.

From the DOS Prompt, enter the following command-line utility: "route print"

Does the current routing table for the Gateway match ?

Ask the Network Administrator to correct the routing table on that Gateway.

Does the Default Gateway respond to the "ping IP" command ?

Check the power switch, cables, and the current settings of unit.

Does the DNS Server respond to the "ping IP" command ?

Ask the Network Administrator to check the Default Gateway, and system status.

Does the unit respond to the "ping host name" command ?

Ask the Network Administrator to check the Default Gateway, and system status.

Does the unit respond to the "telnet" command ?

Replace the SC PCB

Ask the Network Administrator to verify the POP/SMTP account, and system status.

4.6.2. Testing the TCP/IP Network

It is beyond the scope of this Service Manual to cover Networking in detail, there are many excellent manuals on this subject, but we hope the information in this section will aid with your troubleshooting efforts. In most cases, the Network Administrator will be able to provide you with needed information or assistance.

When encountering Network problems during an onsite service call or during the installation stage, try to isolate the steps that are not being completed so that you can quickly locate the components that don't work. It is best to organize your troubleshooting efforts by understanding what should be happening, then you can trace the path and see where the problem is occurring.

In our case, we use TCP/IP for transportation of data from one system to another, which involves a whole series of events occurring throughout a number of different layers.
As with all networking, TCP/IP works better when its plugged in, therefore, start your troubleshooting by checking the Physical Connectivity first, the cable(s).

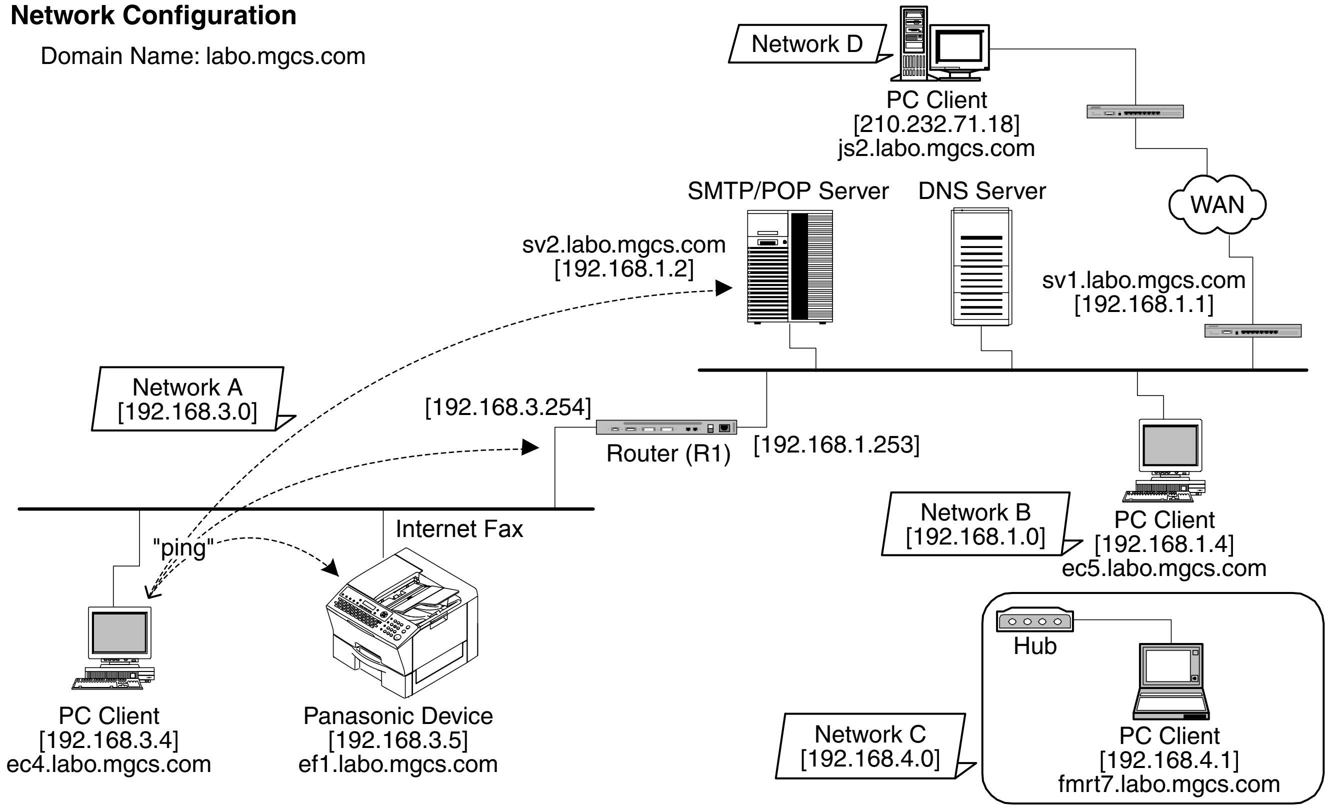
In our examples, we'll use several simple tools readily available in the DOS command-line utility for troubleshooting. There are many other utilities available for checking more detailed information, some are Free of charge, others are available for a nominal fee.

1. System Diagram Model

Ask the customer to provide you with the Pre-Installation Information form, that was filled out by the Network Administrator.
A description or system diagram for the unit, including its physical address, email server and DNS server is required.

Network Configuration

Domain Name: labo.mgcs.com


Network D
PC Client
[210.232.71.18]
js2.labo.mgcs.com
SMTP/POP Server
DNS Server
WAN
sv2.labo.mgcs.com
[192.168.1.2]
sv1.labo.mgcs.com
[192.168.1.1]
Network A
[192.168.3.0]
[192.168.3.254]
Router (R1)
[192.168.1.253]
Network B
[192.168.1.0]
PC Client
[192.168.1.4]
ec5.labo.mgcs.com
"ping"
Internet Fax
Hub
PC Client
[192.168.3.4]
ec4.labo.mgcs.com
Panasonic Device
[192.168.3.5]
ef1.labo.mgcs.com
Network C
[192.168.4.0]
PC Client
[192.168.4.1]
fmrt7.labo.mgcs.com

2. Checking the Current Configuration

Print the current unit Internet Parameters configuration.
Locate a PC connected to the same Subnet Mask as the unit, then from the DOS Prompt, type the following command-line utility: **“ipconfig /all”** for Windows 2000 / XP / 2003 / Vista.
Verify that the displayed Network configuration on the PC, matches the following Internet Parameter settings of the unit:
Default Gateway IP Address:

DNS Server IP Address:
Subnet Mask: (whether it is valid)

For Windows 2000 / XP / 2003 / Vista

The following example shows the output after you type “ipconfig /all” at a command prompt:

```
C:\>ipconfig /all
Windows NT IP Configuration
        Host Name - - - - - - - - - - - - - - - - - - - - : ec4.labo.pcc.com
        DNS Servers - - - - - - - - - - - - - - - - - - - : 192.168.1.1
        Node Type - - - - - - - - - - - - - - - - - - - - - : Hybrid
        NetBIOS Scope ID - - - - - - - - - - - - - - :
        IP Routing Enabled. - - - - - - - - - - - - - : No
        WINS Proxy Enabled - - - - - - - - - - - - : No
        NetBIOS Resolution Uses DNS - - - : No
        Ethernet adapter IBMFE1 - - - - - - - - :
        Description - - - - - - - - - - - - - - - - - - - - : IBM 100/10 EtherJet PCI Adapter
        Physical Address - - - - - - - - - - - - - - - : 00-04-AC-EE-9C-E8
        DHCP Enabled - - - - - - - - - - - - - - - - - : No
        IP Address - - - - - - - - - - - - - - - - - - - - - : 192.168.3.4
        Subnet Mask - - - - - - - - - - - - - - - - - - - : 255.255.255.0
        Default Gateway - - - - - - - - - - - - - - - - : 192.168.3.254
        Primary WINS Server - - - - - - - - - - - : 192.168.3.18
```

From the above examples, you know the Network configuration for the specified Subnet Mask is as follows: IP Address: 192.168.3.4; Subnet Mask: 255.255.255.0; Default Gateway (Default Router IP Address): 192.168.3.254; DNS Server: 192.168.1.1 and the Domain Name: labo.mgcs.com (obtained from the Host Name).

3. Using “PING” to Test Physical Connectivity

The Packet Internet Groper (PING) is a command-line tool included with every Microsoft TCP/IP client (any DOS or Windows client with the TCP/IP protocol installed). PING is a simple utility that is used to send a test packet to a specified IP Address or Hostname, then, if everything is working properly, the packet is echoed back (returned).

Sample command-line PINGing and parameters are shown below. There are several available options that can be specified with the PING command. However, for our examples, we will use two options (-n and -w) which are commonly used when the response from the destination location is too long.

-n *count* : The number of echo requests that the command should send. The default is four.
-w *timeout* : Specifies the period PING will wait for the reply before deciding that the host is not responding.

PINGing the Unit

```
C:\WINDOWS>ping ef1.labo.pcc.com
Pinging ef1.labo.pcc.com [192.168.3.5] with 32 bytes of data:
Reply from 192.168.3.5: bytes=32 time=5ms TTL=253
Reply from 192.168.3.5: bytes=32 time=4ms TTL=253
Reply from 192.168.3.5: bytes=32 time=4ms TTL=253
Reply from 192.168.3.5: bytes=32 time=4ms TTL=253
```

PINGing the Default Gateway (Default Router IP Address)

```
C:\WINDOWS>ping 192.168.3.254
Pinging 192.168.3.254 with 32 bytes of data:
Reply from 192.168.3.254: bytes=32 time=5ms TTL=253
Reply from 192.168.3.254: bytes=32 time=4ms TTL=253
Reply from 192.168.3.254: bytes=32 time=4ms TTL=253
Reply from 192.168.3.254: bytes=32 time=4ms TTL=253
```

PINGing the SMTP/POP Server

```
C:\WINDOWS>ping sv2.labo.pcc.com

Pinging sv2.labo.pcc.com [192.168.1.2] with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=5ms TTL=253
Reply from 192.168.1.2: bytes=32 time=5ms TTL=253
Reply from 192.168.1.2: bytes=32 time=5ms TTL=253
Reply from 192.168.1.2: bytes=32 time=5ms TTL=253
```

If for some reason, the physical connection is missing, the echo reply will not be received from the destination and the following output is displayed:

```
C:\WINDOWS>ping fmrt7.labo.pcc.com

Pinging fmrt7.labo.pcc.com [192.168.4.1] with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.4.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum =  0ms, Average =  0ms
```

If the physical destination is far and it's connected by WAN (Wide Area Network), the PING option command default value must be changed to compensate for the expected delayed response.

e.g.
-n 10 : The number of echo requests that the command should send.
-w 2000 : Specifies the period PING will wait for the reply before deciding that the host is not responding.

```
C:\WINDOWS>ping js2.labo.pcc.com -n 10 -w 2000

Pinging js2.labo.pcc.com [210.232.71.18] with 32 bytes of data:

Reply from 210.232.71.18: bytes=32 time=633ms TTL=252
Reply from 210.232.71.18: bytes=32 time=645ms TTL=252
Reply from 210.232.71.18: bytes=32 time=810ms TTL=252
Reply from 210.232.71.18: bytes=32 time=455ms TTL=252
Reply from 210.232.71.18: bytes=32 time=645ms TTL=252
Reply from 210.232.71.18: bytes=32 time=633ms TTL=252
Reply from 210.232.71.18: bytes=32 time=677ms TTL=252
Reply from 210.232.71.18: bytes=32 time=703ms TTL=252
Reply from 210.232.71.18: bytes=32 time=633ms TTL=252
Reply from 210.232.71.18: bytes=32 time=633ms TTL=252
```

4. Tracing a Packet Route

Another useful command-line utility is TRACERT, which is used to verify the route a packet takes to reach its destination. The result shows each router crossed and how long it took to get through each particular router to reach the specified destination.
The time it takes to get through a particular router is calculated three times and displayed for each router hop along with the IP Address of each router crossed. If a FQDN (Fully Qualified Domain Name) is available, it will be displayed as well.

This utility is useful for two diagnostic purposes:

a. To detect whether a particular router is malfunctioning along a known path. For example, if you know that packets on a network always go through London to get from New York to Berlin, but the communication is failing. A TRACERT to the Berlin address shows all the hops up to the point where the router in London should respond. If it does not respond, the time values are shown with an asterisk (*), indicating the packet timed out.

b. To determine whether a router is slow and needs to be upgraded or additional routers should be installed on the network. You can determine this by simply comparing the time it takes for a packet to get through a particular router. If its return time is significantly higher than the other routers, it should be upgraded.

To use this utility, from the DOS command-line, type: tracert <IP Address or Hostname>

Tracing the Route to SMTP/POP Server

```
C:\WINDOWS>tracert sv2.labo.pcc.com
Tracing route to sv2.labo.pcc.com [192.168.1.2]
over a maximum of 30 hops:

 1    4 ms    2 ms    2 ms  192.168.3.254
 2    4 ms    5 ms    5 ms  sv2.labo.pcc.com [192.168.1.2]

Trace complete.
```

5. Managing Network Route Tables

In the simplest case a router connects two network segments. In this model, the system used to join the two segments needs to know only about these segments.
The routing table for router R1 in this case is simple; the following table shows its key routes:

Network Address	Netmask	Gateway	Interface
192.168.3.0	255.255.255.0	192.168.3.254	192.168.3.254
192.168.1.0	255.255.255.0	192.168.1.253	192.168.1.253

When the Unit at 192.168.3.5 attempts to communicate with the Unit at 192.168.1.x, IP performs the ANDing process to find two things: The local network ID is 192.168.3.0, and the destination network ID is not. This means, that the destination host is not on the local network.

IP, is responsible to find a route to the remote network, and therefore, it consults the routing table. Here, the local host normally determines that the next step in the route is the Default Gateway, and sends the packet to router R1.

The router R1, receives the packet. After determining that the packet is for another host and not the router itself, it checks the routing table. It finds the route to 192.168.1.0 and sends the packet through the interface to the Unit at 192.168.1.x, which receives the packet. This is a simple route that took only a single hop.

When another network is added as the number of hosts grows, it gets complicated, and the systems on the most distant networks cannot communicate. When the router receives a packet in this case, it cannot find a route to the remote network. It then discards the packet and a message indicating “destination host unreachable” is sent to the originator.

Here, is where the ROUTE command-line utility is useful when dealing with more than two networks, and is used by Administrators to statically manage a route table by adding, deleting, changing and clearing the route table. It has a number of options that are used to manipulate the routing tables, some are shown below:

- MASK
  If this switch is present, the next parameter is interpreted as the netmask parameter.
- Netmask
  If included, specifies a sub-net mask value to be associated with this route entry. If not specified, it defaults to 255.255.255.255.
- Gateway
  Specifies the gateway.
- METRIC
  Specifies the metric / cost for the destination.

All symbolic names used for the destination are looked up in the network database file NETWORKS. The symbolic names for the gateway are looked up in the host name database file HOSTS.
When the packet does not reach the specified destination even when the physical connection is properly made, check the registered persistent routes on the same subnet as the Unit by typing “route print” in the DOS command-line. The output display is shown below:

```
C:\WINDOWS>route print
Active Routes:
 Network Address      Netmask          Gateway Address    Interface      Metric
 0.0.0.0              0.0.0.0          192.168.3.254      192.168.3.2    1
127.0.0.0             255.0.0.0        127.0.0.1          127.0.0.1      1
192.168.3.0           255.255.255.0    192.168.3.2        192.168.3.2    1
192.168.3.2           255.255.255.255  127.0.0.1          127.0.0.1      1
192.168.3.255         255.255.255.255  192.168.3.2        192.168.3.2    1
224.0.0.0             224.0.0.0        192.168.3.2        192.168.3.2    1
255.255.255.255       255.255.255.255  192.168.3.2        192.168.3.2    1
```

6. Host Name Query on DNS Server

Windows 2000 / XP / 2003 / Vista also has a tool that enables you to test DNS to verify that it is working properly. This utility is not available on Windows 98/Me.
From the DOS command-line, type “NSLOOKUP” to display the following output:

```
C:\>nslookup
Default Server:  sv1.labo.pcc.com
Address:  192.168.1.1
```

NS(Name Server) Record in Domain

From the DOS command-line, type “ls -t NS <Domain Name>” to display the following output:

```
> ls -t NS labo.pcc.com.
[sv1.labo.pcc.com.]
 labo.pcc.com.          NS   server = sv1.labo.pcc.com
```

MX(Mail Exchange) Record in Domain

From the DOS command-line, type “ls -t MX <Domain Name>” to display the following output:

```
> ls -t MX labo.pcc.com
[sv1.labo.pcc.com]
 labo.pcc.com.             MX    10   sv2.labo.pcc.com
```

A (Address) Record in Domain

From the DOS command-line, type “ls -t A <Domain Name>” to display the following output:

```
> ls -t A labo.pcc.com
[sv1.labo.pcc.com]
 labo.pcc.com.       NS   server = sv1.labo.pcc.com
 sv1                   A      192.168.1.1
 sv2                   A      192.168.1.2
 ec5                   A      192.168.1.4
 ec4                   A      192.168.3.4
 ef1                   A      192.168.3.5
```

(To leave from this menu, type “exit” on the command-line.)

7. Testing Unit Using the TELNET Command

TELNET is a terminal emulation protocol. TELNET enables PCs and workstations to function as dumb terminals in sessions with hosts on internet works.
From Windows 2000 / XP / 2003 / Vista, use the TELNET to test the communication of TCP/IP and SMTP Protocol manually to the Unit. This method eliminates the SMTP Server.

For better understanding, type “telnet” in the DOS Command-line to bring up the Telnet screen.

Essential to input”25” after the IP address, to select the “Port:25”.
For example,

```
(Windows XP)
C:\Documents and Setting\..........> telnet ef1.labo.pcc.com 25
```

```
C:\WINDOWS>telnet ef1.labo.pcc.com 25
(or  C:\WINDOWS>telnet 192.168.3.5 25)

[Press the Enter Key]

220 ef1.labo.pcc.com DPxxxx V.xx

helo
250 Hello

mail from:test
250 Sender OK

rcpt to:fax@labo.pcc.com
250 Receipient OK

data
354 Email, end with "CRLF . CR LF"


[Press the Enter Key]
Panasonic Internet Fax
test
test
[Press the Enter Key]
[Press the Enter Key]
[Press the Enter Key]
.
[Press the Enter Key]

250 OK, Mail accept

quit
221 Closing transaction channel
```

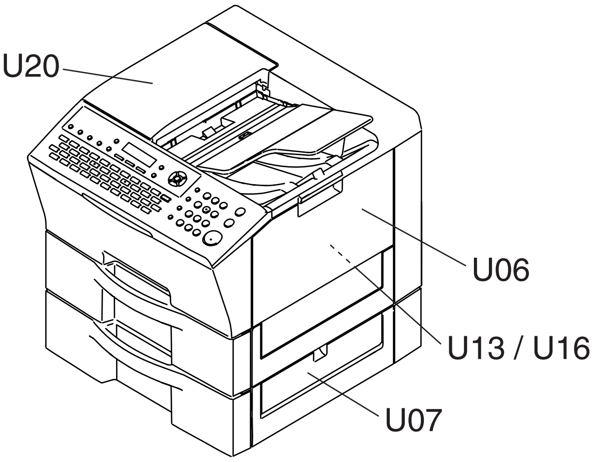
4.7. Error Codes (For Copier)

The self-diagnostic functions detect troubles in the important components of the copier. When trouble occurs, the machine stops.

Note:

Some Codes are not used in the UF-8300/8200/7300/7200 and are reserved for future use.

4.7.1. User Error Codes (U Code)



Note:

Uxx and a message will appear on the Display Panel.

User Error Codes (U Code) Table

Code	Item	Check Points
U06	CLOSE RIGHT COVER	1. Right Cover is open. 2. Right Cover Sensor is disconnected. 3. Right Cover Sensor is defective.
U07	CLOSE JAM COVER	1. Jam Cover is open. 2. Jam Cover Sensor is disconnected. 3. Jam Cover Sensor is defective.
U13	TONER IS RUNNING LOW or OUT OF TONER	1. Toner Cartridge is incorrectly installed. 2. Low Toner. 3. Toner Sensor is disconnected. 4. Toner Sensor is defective. 5. Engine PCB connector is disconnected. 6. Engine PCB is defective.
U16	NO CARTRIDGE	1. No Toner Cartridge.
U20	CLOSE ADF COVER	1. ADF Cover is open. 2. ADF is not installed correctly. 3. ADF Cover Sensor is disconnected. 4. ADF Cover Sensor is defective. 5. LVPS connector is disconnected. 6. LVPS is defective.

4.7.1.1. Low Toner Messages / Operation

The Toner Cartridge Yield is approximately 10,000 pages using Letter or A4 size paper and 5% Black coverage, however, the maximum yield will not exceed 11,500 pages.

The machine controls the printer to maintain good print quality by controlling the Bias Voltage with the Low Toner Sensor and the Print Counter.

There are three Toner warning LCD Displays:

LCD 1: [TONER IS RUNNING LOW: U13]

Low Toner sensor detects Low Toner or the machine has printed 11,000 pages.
Preparing a new cartridge for replacement is recommended.

LCD 2: [WARNING TONER LOW LESS THAN 50 PAGES]

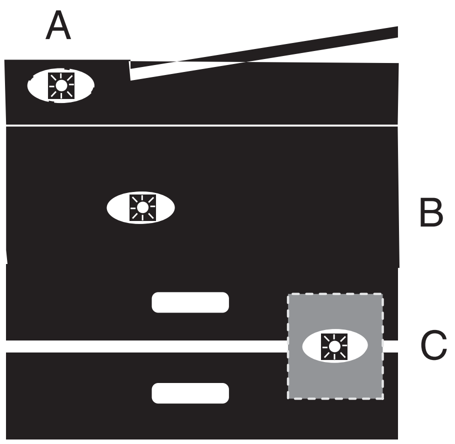
450 pages have been printed since the LCD 1 appeared.
Replacement with the new cartridge is recommended.

LCD 3: [OUT OF TONER: E13]

50 pages have been printed after LCD 2 appeared.
Replace with the new cartridge.

When replacing with a New Cartridge, refer to the Operating Instructions (For Facsimile).

4.7.2. Jam Error Codes (J Code)

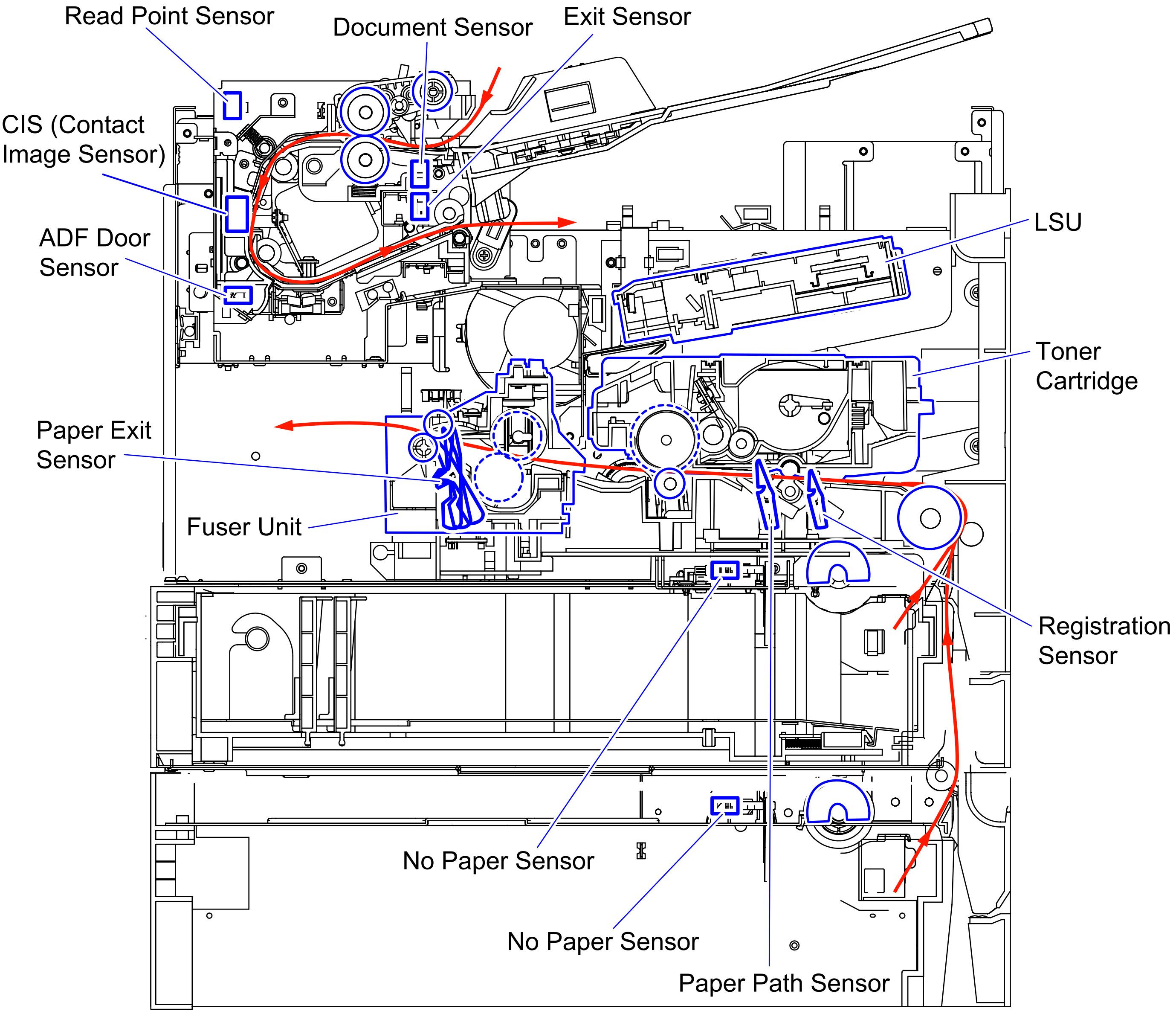


Section	Jam Location
A	ADF
B	Paper Transport / Exit Area
C	Paper Entry Area

Jam Error Codes (J Codes) Table

Code	Contents	Section
J01	The Registration Sensor did not detect paper within a predetermined time after the Paper Feed Roller started rotating. (1st Feeder Unit)	C
J02	The Registration Sensor does not detect paper within a predetermined time after the Paper Feed Roller started rotating. (2nd Feeder Unit)	
J43	Paper Jam in the Registration Sensor or Paper Path Sensor.	B, C
J44	Paper Jam in the Paper Exit Sensor.	
J71	Original was longer than 39.3 in (1m). (Information Code 031 is printed on the Transaction Journal instead.)	A
J72	Read Point Sensor does not go ON within several seconds after the original starts feeding. (Information Code 030 is printed on the Transaction Journal instead.)	
J74	The Exit Sensor does not go ON within a predetermined time after the Sensor is activated.	
J75	The Exit Sensor does not go OFF within a predetermined time after the Sensor is activated.	
J92	The Original was pulled out when feeding an original.	
J93	The Original remained in the ADF.	
J94	The ADF does not go off after the predetermined time. Unexpected Jam timing (i.e. Original is too short, etc.)	

• Sensor and Switch Location


Read Point Sensor
Document Sensor
Exit Sensor
CIS (Contact Image Sensor)
ADF Door Sensor
LSU
Toner Cartridge
Paper Exit Sensor
Fuser Unit
Registration Sensor
No Paper Sensor
No Paper Sensor
Paper Path Sensor

4.7.3. Mechanical Error Codes (E Code)

E1: Optical Unit Error		
Code	**Function**	**Check Points**
E1-22	Polygon Motor Synchronization	1. SPC PCB connector is disconnected. 2. SPC PCB is defective. 3. Laser Unit is defective. 4. LVPS connectors is disconnected. 5. LVPS is defective. 6. SC PCB is defective.

E2: Lift DC Motor Error		
Code	**Function**	**Check Points**
E2	Not Applicable	-

E3: Development System Error

Code	Function	Check Points
E3-20	Main Motor Rotation	1. Drive Mechanism is defective. 2. Main Motor connector is disconnected. 3. Main Motor is defective. 4. SPC PCB connector is disconnected. 5. SPC PCB is defective. 6. LVPS is defective.

E4: Fuser Unit Error

Code	Function	Check Points
E4-01	Fuser Warm-up Temperature	1. Fuser Thermistor is dirty. 2. Thermistor position is incorrect. 3. Fuser temperature is low. 4. Thermistor is defective. 5. Fuser Lamp connector is disconnected. 6. Fuser Thermostat is defective. 7. Fuser Lamp is defective. 8. SPC PCB connector is disconnected. 9. SPC PCB is defective.
E4-10	Exhaust Fan Motor Rotation (Fuser Unit Side) Inclination Detection	1. Exhaust Fan connector is disconnected. 2. Exhaust Fan is defective. 3. LVPS connector is disconnected. 4. LVPS is defective. 5. SPC PCB is defective. 6. Inclination Sensor detected Inclination of the machine. Check the machine is placed properly, and reset the machine by unplugging the power cord from the outlet and plug the power cord again.

E5: System Error

Code	Function	Check Points
E5-11	Printer Engine Communication Abnormal	1. SC/SPC PCB connector is disconnected. 2. SC/SPC PCB is defective.
E5-12	Main CPU/SPC Interface Error	1. SC/SPC PCB connector is disconnected. 2. SC/SPC PCB is defective.
E5-19	Scanner Line Synchronization	1. SC/SPC PCB connector is disconnected. 2. SC/SPC PCB is defective.
E5-40	Sort Memory Abnormal	1. Sort Memory defective. 2. SC PCB connector is disconnected. 3. SC PCB defective.

E7: Optional Unit Error

Code	Function	Check Points
E7-90	Hardware Key Abnormal	1. Incorrect Hardware Key is installed. 2. Hardware Key is defective.

Note:

Error codes will appear only when the optional accessories are installed.

E13: Low Toner or Out of Toner		
Code	**Function**	**Check Points**
E13	TONER IS RUNNING LOW or OUT OF TONER	1. Toner Cartridge is incorrectly installed. 2. Out of Toner. 3. Low Toner Sensor is disconnected. 4. Low Toner Sensor is defective. 5. SPC PCB connector is disconnected. 6. SPC PCB is defective.

4.8. Information Code Table (For Facsimile)

Fax Information Codes				
Code	**Mode**	**Phase**	**Description of Problem**	**Cause**
001	RCV COPY	C, D	Leading edge of the recording paper fails to reach the Timing Sensor. (1st Tray)	Recording paper jam. Timing Sensor abnormal.
002	RCV COPY	C, D	Leading edge of the recording paper fails to reach the Timing Sensor. (2nd Tray)	Recording paper jam. Timing Sensor abnormal.
007	RCV COPY	C, D	1. Leading edge of the recording paper fails to reach the Paper Exit Sensor. 2. Recording paper has not completely passed the Paper Exit Sensor.	Recording paper jam. Paper Exit Sensor abnormal.
008			Paper Tray is opened while paper is feeding.	Paper Tray is opened.
010	RCV COPY	B, C	No recording paper.	No recording paper or paper is not set properly. No Paper Sensor is defective.
011	STANDBY	B, C	Paper Tray is not installed properly.	Connector is not installed properly.
012	RCV	C, D	The length of the received document is over 2 m.	Transmitter Document Jam.
017			Incorrect paper size loaded in the Paper Tray.	Paper size is incorrect.
030	XMT	B	Read Point Sensor does not go ON within 10 seconds after the document starts feeding.	Document is not set properly. Defective Read Point Sensor.
031	XMT COPY	C	Transmitting document was longer than 2 meter (or 78.7 in).	The document may jam. Defective Read Point Sensor.
041	STANDBY RCV COPY	B, C, D	Out of Toner.	No toner. Defective Low Toner Sensor.
043	STANDBY RCV COPY	B, C, D	Low Toner.	Toner is getting low. Defective Low Toner Sensor.
045	STANDBY	-	No Toner Cartridge.	Toner Cartridge has not been installed. Defective Toner Cartridge Sensor.
060	-	A	Printer Cover is open.	Cover is not firmly closed. Connectors are not firmly connected.
061	-	A	ADF Door is open.	Door is not firmly closed. Connectors are not firmly connected.
302	XMT RCV	B, C, D	No response of 2nd G3 PCB.	2nd G3 PCB is defective.
400	XMT	B	T1 timer (35 ± 5 sec.) elapsed without detecting 300 bps signal.	Incorrect number was dialed and the START button was pushed. Telephone line was disconnected while dialing. SC PCB or MJR PCB is defective. Receiver is defective. (It may only be transmitting CED)

Fax Information Codes				
Code	**Mode**	**Phase**	**Description of Problem**	**Cause**
401	XMT	B	DCN was returned from receiver while transmitter is waiting for CFR or FTT.	Your machine's ID Number is not programmed. Possible incompatibility or incorrect Password.
402	XMT	B	DCN was returned from receiver while transmitter is waiting for NSF/ DIS.	Receiver working in non-ITU mode only. (Possible incompatibility)
403	RCV (Polling)	B	Transmitter had no polling function.	"POLLED=ON" (polling XMT ready) is not set at the transmitter. Document to be transmitted is not placed at the transmitter.
404	XMT	B	Transmitter sent NSS (or DCS) followed by TCF three times, but the receiver did not respond. (CFR or FTT is usually returned)	Receiver is defective. (Modem) SC PCB or FXB PCB is defective. Receiver disconnects line during first NSS (or DCS) is transmitted.
405	XMT	B	Transmitter received FTT after it transmitted TCF at 2400bps. Received RTN after communicating at 2400 bps.	Line quality is poor. (TCF is damaged due to line noise) Receiver is defective. (Modem, etc.) SC PCB or FXB PCB is defective.
406	RCV (Password Comm.)	B	XMT-Password mismatched. RCV-Password mismatched. Selective RCV incomplete.	XMT, RCV password does not match. Last 4 digits of TSI does not match with the last 4 digits of ONE-TOUCH, ABBR telephone number.
407	XMT	D	Transmitter received no response after it transmitted post message, such as EOP, MPS, EOM, etc...or received DCN.	Receiver is defective. (No paper, paper jamming, etc.) Receiver ceased receiving because of excessive error. (Line quality is poor) SC PCB or FXB PCB is defective.
408	XMT	D	Transmitter received RTN after it transmitted EOP, MPS, or EOM.	Receiver receives data with error. (Line quality is poor) Receiver is defective. (Modem, etc.) SC PCB or FXB PCB is defective.
409	XMT	D	Transmitter receives PIN after it transmitted a post message, such as EOP, MPS, EOM, etc.	Receiver receives data with error due to poor line quality, and receiving operator requests voice contact. Receiver is defective. (Modem, etc.) SC PCB or FXB PCB is defective.
410	RCV	D	Received DCN while waiting for post command. (EOP, MPS, EOM, etc.)	Interface or line is faulty. Transmitter is defective.
411	RCV (Polling)	B	Received DCN after transmitting NSC.	Transmitter is not ready for polling communication. Password does not match between transmitter and receiver.
412	G3 RX	B, D	No response within 12 seconds in NSS/DCS/MPS wait state. (After transmitting FTT)	Transmitter is defective. SC PCB is defective.
414	RCV (Polling)	B	No response received after transmitting 3rd NSC.	Password does not match between transmitter and receiver. Transmitter is defective. (No original, document jam, etc.)
415	XMT (Polling)	B	Remote side attempted to receive message from your machine in polling communication.	Inform the remote side that your machine does not have the polling transmission feature.

Fax Information Codes

Code	Mode	Phase	Description of Problem	Cause
416	RCV	D	Receiver did not detect post command, such as EOP, MPS, EOM, etc.	Transmitter is defective. Line quality is poor. (RTC signal is distorted due to line noise) SC PCB or FXB PCB is defective.
417	RCV	C	Receiver returned RTN in response to post message.	Line quality is poor. (There are excessive errors in received data) SC PCB or FXB PCB is defective.
418	RCV	C	Receiver transmitted PIN in response to PRI-Q from transmitter. (Transmitting operator requests voice contact)	Line quality is poor. (There are excessive errors in received data) SC PCB or FXB PCB is defective.
420	RCV	B	T1 timer (35 sec.) elapsed without detecting 300 bps signal.	Incorrect incoming call type (voice). (Non-facsimile communication) Transmitter is defective. SC PCB or FXB PCB is defective.
421	RCV	B	Busy Tone is detected after sending NSF Signal.	Remote station disconnected the line. Wrong number is dialed.
422	XMT	B	Content of NSF (or DIS) or NSC (or DTC) was invalid.	There is an incompatibility.
427	G3 RCV	B	DCN received to NSF/CSI/DIS transmitted.	The interface is incompatible.
434	XMT or RCV	B	CD (response from Modem) did not turn OFF within 180 sec. after receiver detected FLAG signal.	Remote unit is defective. SC PCB or FXB PCB is defective.
436	G3 RX	C	DCN received after transmitting FTT.	Transmitter is defective or incompatible. Line quality is poor.
438	RCV	B	Refusal ID (Junk Fax ID) received in Phase B.	Transmitter ID is registered as a Junk Fax. JUNK is printed as the Information Code on the Comm. Journal.
456	RCV	B	Received relay transfer request or confidential document to distribute to an end receiving station or all confidential mailboxes are used.	
457	RELAY XMT CONF. XMT/ POLL	B	Remote unit does not have Relayed XMT or Confidential Comm. capability.	
459	RCV	C	Failed training in Phase C.	Line quality is poor. (Training signal is distorted due to line noise) SC PCB or FXB PCB is defective.
490	RCV	C	Sum of error lines exceeded the limit (Function Parameter No. 70) of 64 lines.	Line quality is poor. SC PCB or FXB PCB is defective.
494	RCV	C	Interval between two EOLs was more than 10 sec. when receiver received message data.	Transmitter is defective. Line quality is poor. (EOL is damaged due to line noise) SC PCB or FXB PCB is defective.
495	XMT RCV	C	During reception, CD turned OFF or continued ON for long time. During communication, lost loop - current.	Line is disconnected. Transmitter is defective. SC PCB or FXB PCB is defective.
496	XMT	C	CS of modem is not able to turn ON.	FXB PCB is defective.

Fax Information Codes				
Code	**Mode**	**Phase**	**Description of Problem**	**Cause**
501	XMT/ RCV(V.34)	B	Remote unit does not have compatible Modem.	
502	XMT/ RCV(V.34)	B, C, D	During reception, CD turned OFF or continued ON for long time. During communication, lost loop - current.	Line is disconnected. Transmitter is defective. SC PCB or FXB PCB is defective.
503	XMT/ RCV(V.34)	B, C, D	CS of modem is not able to turn ON during training.	FXB PCB is defective. Line is disconnected.
504	RCV/V.34 (Polling)	B	Polling is rejected from the remote station.	No polling original is set.
505	XMT/V.34 (Polling)	B	Polling XMT is rejected.	No polling original is set.
540	XMT ECM	B	No response after transmitting 3rd CTC or DCN received.	Incompatible interface.
541	XMT ECM	D	No response after transmitting 3rd EOR or received DCN.	Line is faulty. FXB PCB abnormal.
542	XMT ECM	D	No response to the 3rd RR transmitted or received DCN.	Remote unit is abnormal.
543	XMT ECM	D	T5 timer (60 sec.) elapsed without MCF.	Remote unit is abnormal.
544	XMT ECM	D	Stopped Transmission after EOR Transmission.	Line is faulty. FXB PCB abnormal.
550	RCV ECM	C	Timer between frames in phase C has elapsed.	Defective remote station.
554	RCV ECM	D	Transmitted ERR after receiving EOR.	Line is faulty.
555	RCV ECM	D	Transmitted PIN after receiving EOR.	Line is faulty and Operator Call requested by RX side.
570	RCV	B	Password or machine code did not match during remote diagnostic communication.	
571	XMT	B	Remote unit did not have the remote diagnostic function.	
580	XMT	B	Sub-address transmission to a unit that has their DIS bit 49 (NSF bit 155) OFF.	Sub-address transmission to a unit that has no Sub-address function.
581	XMT	B	Sub-address Password transmission to a unit that has their DIS bit 50 (NSF bit 156) OFF.	Sub-address transmission to a unit that has no Sub-address function.
582	XMT	B	Sub-address SEP (for Polling) transmission to a unit that has their DIS bit 47 (NSF bit 130) OFF.	Sub-address transmission to a unit that has no Sub-address function.
601	XMT		ADF Door was opened during ADF transmission.	
623	XMT	A	No original was in the ADF. (Built-in dialer engaged)	Operator removed the original from the ADF after dialing was completed. Original was not set properly in the ADF.

Fax Information Codes				
Code	**Mode**	**Phase**	**Description of Problem**	**Cause**
630	XMT or RCV (Polling)	B	Redial count over.	No dial tone detected. Sensor dial tone is not detected. (Destination dependent) Busy tone is detected. (Destination dependent) T1 timer (35 ± 5 sec.) elapsed without a signal from the receiver.
631	XMT	A	**"STOP"** button was pressed during Auto Dialing.	
634	XMT	B	Redial count over with no response or busy tone was not detected. **Note:** U.S.A. and Canadian models will redial only once if a busy tone is not detected.	Telephone line cable is disconnected. Wrong number is dialed. SC or FXB PCB is abnormal.
638	XMT	LAN	Power turned Off with applicable data in memory or during communication.	Power switched off. Power failure occurred.
700	XMT RCV	PSTN LAN	Communication terminated by Operator pressing the "STOP" key.	
711	RCV	LAN	Incorrect LDAP settings.	LDAP Server Name, LDAP Login Name, LDAP Password and/or LDAP Search Base are incorrect.
712	XMT	LAN	Unknown email address replied from the Mail Server.	Mail Server received an incorrect email address. (Dependent on Server's Mail application)
714	XMT RCV	LAN	LAN Interface error. Cannot logon to the LAN.	The 10Base-T/100Base-TX cable is not connected. An unexpected LAN problem occurred. Check the SC PCB connector.
715	XMT	LAN	TCP/IP connection timed out.	Incorrect IP Address is set. Verify the IP Address, Default Router IP Address, SMTP Server IP Address.
716	XMT	LAN	Cannot logon to the LAN.	Incorrect SMTP Server IP Address is set. No email application is activated on the Mail Server.
717	XMT	LAN	Incomplete SMTP Protocol transmission.	Mail Server's hard disk may be full. Mail Server is defective.
718	XMT	LAN	Page Memory Overflow occurred while receiving printing data. The paper size selected within your application to print is larger than the paper size loaded in the Tray(s).	Check the document size and resolution. Ask originator to re-send in a supported size and resolution.
719	RCV	LAN	Received data via LAN is in a format that is not supported.	Ask the originator to re-send with a supported file attachment: * In a TIFF-F format. * Image data conforming to A4/Letter size.
720	POP	LAN	Unable to connect with the POP Server.	Incorrect POP Server Address is set. POP Server is down.
721	POP	LAN	Unable to login to the POP Server.	Incorrect User Name or Password is set.

Fax Information Codes

Code	Mode	Phase	Description of Problem	Cause
722	RCV	LAN	Failed to obtain the Network Parameters (such as: IP Address, Subnet Mask, Default Gateway IP Address, etc.) from the DHCP server.	LAN Cable is disconnected. DHCP is not available. (Contact the Network Administrator.)
725	XMT POP	LAN	DNS Server connection timed out.	Incorrect DNS Server Address is set. DNS Server is down.
726	XMT POP	LAN	Received an error response from the DNS Server.	Incorrect POP Server Address is set. Incorrect SMTP Server Address is set.
727	XMT	LAN	Received an Error or No Response from the Remote Internet Fax. (SMTP Direct XMT)	Remote Internet Fax Errors: Busy or Job Number Overflow for Relay XMT. (Retry is possible)
728	XMT	LAN		Remote Internet Fax Errors: Memory Overflow or No Power. (Retry is not possible)
729	XMT	LAN	Failed to authenticate (SMTP AUTHENTICATION) when connecting with the SMTP server.	SMTP AUTHENTICATION, User Name and/or Password are incorrect. (Contact the Network Administrator.)
730	RCV	LAN	Unable to program the Internet parameters or the autodialer via Email from a PC.	Verify that the Fax Parameter #158 is set to Valid.
731	RCV	LAN	Dialer full while Relayed Transmission Request was received.	Dial buffer for manual number dialing (70 stations) is being used.
741	XMT, Polling	PSTN	Unable to dial	Deleted the registered station name before dialing with Timer Controlled Communications, etc.
742	XMT NYSE Fax Forward	PSTN LAN	Unable to forward to the pre-programmed Supervisor's Fax machine or PC. (USA and Canada Only)	Communication error with the pre-programmed Supervisor's Fax machine or PC. (Busy, No Response, etc.)
800	Relay Comm.	PSTN	The machine was requested to relay a document but has no Relay Hub capability.	
814	Conf. XMT Conf. Polling Relay Comm.	PSTN	The remote station does not have Relay XMT nor Confidential Communication capability.	
815	Conf. RCV	PSTN	Mailbox full.	
816	Conf. Polled	PSTN	The received Polling Password did not match.	
825	Conf. RCV Conf. Polled	PSTN	Parameter settings of the remote station are not properly set.	
850	Relay Comm.	-	Relay Communication is rejected.	The dept. code of the Fax Driver/ Panafax Desktop is mismatched with the registered code in the machine.
870	MEM XMT MEM RCV	PSTN LAN	Memory overflow occurred while storing documents into memory.	Memory overflow on the Fax.
871	MEM XMT MEM RCV	PSTN LAN	Memory management file number and page number exceeded while storing documents into memory.	File number and page number overflow on the Fax.
880	-	-	File Access Error.	

Fax Information Codes				
Code	**Mode**	**Phase**	**Description of Problem**	**Cause**
884	-	-	File Access Error.	
961	RCV	LAN	Memory file access error.	SC PCB is defective.
962	XMT	PSTN	Memory file access error.	SC PCB is defective.
		LAN	Memory file access error.	SC PCB is defective.

Note:

When G3 option is installed, check FXB PCB or G3B PCB.

4.9. Diagnostic Codes (For Facsimile)

The 16-digit Diagnostic Code (*1) is provided for the service technician to analyze how the communication was performed. The code is recorded on the Journal.

Journal Example

```
 ***************** -JOURNAL- ************************* DATE MMM-dd-yyyy ***** TIME 15:00 ***** P.01
                                                    (*2)                                     (*1)
NO.  COMM. PAGES     FILE  DURATION  X/R    IDENTIFICATION         DATE     TIME         DIAGNOSTIC

001   OK   001/001   149   00:00:52  XMT    ☎215                   MMM-dd   20:04      C8444B0577000000
002   --   001/001   151   00:00:02  XMT    TEST                   MMM-dd   20:07       01 STN(S)  LAN
003   --   003/003   153   00:00:20  XMT    fax@nwfax1             MMM-dd   20:09       01 STN(S)  LAN
004   OK   003       154   00:00:21  RCV    fax@nwfax1.rdmg.mgcs   MMM-dd   20:10                  LAN
005   OK   001       155   00:00:19  RCV    215                    MMM-dd   20:11      C0542B0577000000
006   634  000/003   156   00:00:00  XMT    ◆☎216                  MMM-dd   20:14      0000000000000000
007   408 *003                00:02:14  XMT    ◆☎217                  MMM-dd   21:17      0040440A30080000

050    OK  001/001   160   00:00:16  XMT    TEL XMT                MMM-dd   20:19      C8444B0577000000
                                         <<  CONTINUE  >>                              ↑               ↑
                                                                              1st digit      16th digit
                                                            -PANASONIC                   -
***** UF-xxxx ********************* -HEAD OFFICE    - ***** -          201 555 1212- *********
```

*2: Remote Station Identification
The ID Priority is selctable by Fax Service Mode 1 No.006 (See section 5.2.3.).

1st Digit: Manufacturer Code

-: Not used/defined

Fax Diagnostic Codes		
Data	**Definition**	
	Manufacturer Code	**Manufacturer Code (New) (Refer to 16th Digit)**
0	-	Brother
1	Casio	Konica
2	Canon	Kyocera
3	Sanyo	-
4	Sharp	-
5	Tamura	-
6	Toshiba	-
7	NEC	-
8	Oki	-
9	Hitachi	-
A	Xerox	-
B	Fujitsu	-
C	Matsushita	-
D	Mitsubishi	-
E	Murata	-
F	Ricoh	-

2nd Digit

-: Not used/defined

Fax Diagnostic Codes				
Data	Definition			
	ID (TSI, CSI, CIG)	RTN	DCN	STOP Button
0	-	-	-	-
1	Received	-	-	-
2	-	Received	-	-
3	Received	Received	-	-
4	-	-	Received	-
5	Received	-	Received	-
6	-	Received	Received	-
7	Received	Received	Received	-
8	-	-	-	Pressed
9	Received	-	-	Pressed
A	-	Received	-	Pressed
B	Received	Received	-	Pressed
C	-	-	Received	Pressed
D	Received	-	Received	Pressed
E	-	Received	Received	Pressed
F	Received	Received	Received	Pressed

3rd Digit

-: Not used/defined

Fax Diagnostic Codes				
Data	Definition			
	Resolution (dpi)	Paper Width		
0	-	A4		
1	S-Fine	A4		
2	400 x 400	A4		
3	300 x 300	A4		
4	-	-		
5	-	-		
6	-	-		
7	-	-		
8	-	-		
9	-	-		
A	-	-		
B	-	-		
C	-	-		
D	-	-		
E	-	-		
F	-	-		

4th Digit

-: Not used/defined

Fax Diagnostic Codes				
Data	Definition			
	Scanning Rate	Resolution		
0	20 ms/line	Std		
1	5 ms/line	Std		
2	10 ms/line	Std		
3	-	Std		
4	40 ms/line	Std		
5	-	Std		
6	-	Std		
7	0 ms/line	Std		
8	20 ms/line	Fine		
9	5 ms/line	Fine		
A	10 ms/line	Fine		
B	-	Fine		
C	40 ms/line	Fine		
D	-	Fine		
E	-	Fine		
F	0 ms/line	Fine		

5th Digit

-: Not used/defined

Fax Diagnostic Codes				
Data	Definition			
	Deferred Comm.	Dialing/RCV	Memory/ Non-Memory	
0	-	Manual Communication	Non-Memory	
1	Used	Manual Communication	Non-Memory	
2	-	Auto Dialing	Non-Memory	
3	Used	Auto Dialing	Non-Memory	
4	-	Auto RCV	Non-Memory	
5	Used	Auto RCV	Non-Memory	
6	-	Remote RCV	Non-Memory	
7	Used	Remote RCV	Non-Memory	
8	-	Manual Communication	Memory	
9	Used	Manual Communication	Memory	
A	-	Auto Dialing	Memory	
B	Used	Auto Dialing	Memory	
C	-	Auto RCV	Memory	
D	Used	Auto RCV	Memory	
E	-	Remote RCV	Memory	
F	Used	Remote RCV	Memory	

6th Digit

-: Not used/defined

Fax Diagnostic Codes				
Data	Definition			
	Polling	XMT/RCV	Selective Comm.	Password Comm.
0	-	RCV	Off	Off
1	Yes	RCV	Off	Off
2	-	XMT	Off	Off
3	Yes	XMT	Off	Off
4	-	RCV	On	Off
5	Yes	RCV	On	Off
6	-	XMT	On	Off
7	Yes	XMT	On	Off
8	-	RCV	Off	On
9	Yes	RCV	Off	On
A	-	XMT	Off	On
B	Yes	XMT	Off	On
C	-	RCV	On	On
D	Yes	RCV	On	On
E	-	XMT	On	On
F	Yes	XMT	On	On

7th Digit

-: Not used/defined

Fax Diagnostic Codes				
Data	Definition			
	Sub-Address Comm.	Confidential Comm.	Relayed Comm.	Turnaround Polling
0	-	-	-	-
1	Yes	-	-	-
2	-	Yes	-	-
3	Yes	Yes	-	-
4	-	-	Yes	-
5	Yes	-	Yes	-
6	-	Yes	Yes	-
7	Yes	Yes	Yes	-
8	-	-	-	Yes
9	Yes	-	-	Yes
A	-	Yes	-	Yes
B	Yes	Yes	-	Yes
C	-	-	Yes	Yes
D	Yes	-	Yes	Yes
E	-	Yes	Yes	Yes
F	Yes	Yes	Yes	Yes

8th Digit

-: Not used/defined

Fax Diagnostic Codes		
Data	**Definition**	
	Advanced Comm.	**Cover Sheet XMT**
0	-	-
1	Report XMT	-
2	Check & Call	-
3	-	-
4	Memory Transfer	-
5	-	-
6	-	-
7	-	-
8	-	Yes
9	Report XMT	Yes
A	Check & Call	Yes
B	-	Yes
C	Memory Transfer	Yes
D	-	Yes
E	-	Yes
F	-	Yes

9th Digit

-: Not used/defined

Fax Diagnostic Codes		
Data	**Definition**	
	Short Protocol	**Standard / Non-Standard**
0	-	Standard
1	-	Standard
2	-	Standard
3	-	Standard
4	-	Standard
5	-	Standard
6	-	Standard
7	-	Standard
8	-	Non-Standard
9	B	Non-Standard
A	-	Non-Standard
B	D	Non-Standard
C	-	Non-Standard
D	-	Non-Standard
E	-	Non-Standard
F	-	Non-Standard

10th Digit

-: Not used/defined

Fax Diagnostic Codes		
Data	**Definition**	
	Coding	**ECM**
0	MH	-
1	MR	-
2	MMR	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	MH	Yes
9	MR	Yes
A	MMR	Yes
B	-	-
C	-	-
D	-	-
E	-	-
F	-	-

11th Digit

-: Not used/defined

Fax Diagnostic Codes		
Data	**Definition**	
	Symbol Rate (V.34)	**V.34**
0	-	-
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	2400 sr	Yes
9	-	-
A	2800 sr	Yes
B	3000 sr	Yes
C	3200 sr	Yes
D	3429 sr	Yes
E	-	-
F	-	-

12th Digit

-: Not used/defined

Fax Diagnostic Codes		
Data	Definition	
	Modem Speed	Modem Speed (V.34)
0	2400 bps	-
1	4800 bps	2400 bps
2	7200 bps	4800 bps
3	9600 bps	7200 bps
4	TC 7200 bps	9600 bps
5	TC 9600 bps	12000 bps
6	12000 bps	14400 bps
7	14400 bps	16800 bps
8	-	19200 bps
9	-	21600 bps
A	-	24000 bps
B	-	26400 bps
C	-	28800 bps
D	-	31200 bps
E	-	33600 bps
F	-	-

13th Digit

-: Not used/defined

Fax Diagnostic Codes		
Data	Definition	
	Line Status	
0	-	
1	Private Line	
2	-	
3	-	
4	-	
5	-	
6	-	
7	-	
8	-	
9	-	
A	-	
B	-	
C	-	
D	-	
E	-	
F	-	

14th Digit

-: Not used/defined

Fax Diagnostic Codes		
Data	Definition	
	Color Comm.	
0	Mono	
1	-	
2	-	
3	-	
4	-	
5	-	
6	-	
7	-	
8	-	
9	-	
A	-	
B	-	
C	-	
D	-	
E	-	
F	-	

15th Digit

-: Not used/defined

16th Digit

-: Not used/defined

Fax Diagnostic Codes		
Data	Definition	
	Paper Length	Manufacturer Code
0	A4	Current
1	B4	Current
2	A3	Current
3	∞	Current
4	A4	New
5	B4	New
6	A3	New
7	∞	New
8	-	-
9	-	-
A	-	-
B	-	-
C	-	-
D	-	-
E	-	-
F	-	-

4.10. Troubleshooting (For Printer)

4.10.1. Checking the Basics

This section explains how to solve problems including error messages, or unexpected printing results.
If the Printing System is not printing or working as expected, and if you are not sure what to do, start your troubleshooting by checking the basics below:

- Ensure that the Ethernet LAN (10Base-T / 100Base-TX) Cable is connected properly
- Ensure that the Internet Parameters are correct
- Ensure that the Unit is turned On
- Ensure that the Paper is set properly in the Unit
- No error message is displayed on the Unit
- Try printing a test page from the printer driver properties dialog box

4.10.2. Document Does Not Print Properly

Problem	Possible Solution(s)
Character is not printing in the correct positions, or the characters near the edges of the page are missing.	• Check, that the paper size and orientation settings in the printer driver to coincide with the application. • Check if the specified paper is loaded in the Panasonic Device. • Increase the Page Margins in the application. The Panasonic Device requires minimum margins of 1/4 inch (5 mm) on all sides.
The font type is incorrect	• Check if the selected font is installed in the PC. • Check if the selected font is being replaced with a proper printer font in the Font Substitution Table of the Printer Driver Properties dialog box. • Select **“Always use True Type fonts”** from the **Font** tab of the Printer Driver Properties dialog box.
The character is not smooth.	• Select an outline font instead of a bit map font.
Fine line print cannot be obtained.	• Select 600 dpi resolution.
Poor photograph print quality.	• Select 600 dpi resolution.
Different character, or symbol from the document is printed.	• Check if the Panasonic Printing System (PCL) printer driver is selected.
The printer does not print anything, or prints irregular images from the middle of the 1st page.	• Insufficient Printer Page Memory in the Panasonic Device, install an Expansion D-RAM Card, or change the resolution to 300 dpi in the **Quality** tab of the Printer Driver Properties dialog box.
Printing is exceedingly slow.	• Select the Spool settings **“Start printing after first page is spooled”** from the **Details** tab of the Printer Driver Properties dialog box. • Select 300 dpi resolution.

4.10.3. Error Message Appears on the PC

Error Message	Possible Solution(s)
Network Print DLL Error.	• Check if the Panasonic Device is turned “On”, and the 10Base-T/ 100Base-TX cable is properly connected. • Printer Properties may be incorrectly configured. (i.e. Printer Port)
Network Port is Busy.	• The Panasonic Device may be processing a different print job, please wait, and try again later. • The Panasonic Device is either Transmitting, or Receiving an email.
Cannot print because an error is found in the current printer setting.	• Verify, that the paper size, or orientation coincide with the application, and the printer driver settings.

4.10.4. Error Message Appears on the Unit

Error Message	Possible Solution(s)
Cannot complete print job; Image memory overflow	• There may not be enough Sort Memory available in the Panasonic Device to complete the print job. Either install an optional Sort Memory, or change the resolution to 300 dpi in the Printer Driver Properties dialog box.
Cannot complete print job; Confirm print condition	• The print settings may not be matched for the system. Change the printing settings in the Printer Driver Properties dialog box. **Ex:** Multi-sized printing.
Cannot print; System error	• Change the resolution to 300 dpi in the Printer Driver properties dialog box.

4.10.5. System Error (CD Drive Related Error During Installation)

Error Message	Possible Solution(s)
Cannot read the drive.	• Insert the CD into the drive, and click “Retry”.

5 Service Modes

5.1. Service Modes (For Copier)

These Service Modes are provided to assist the technician in checking for abnormalities in the copier and a means of making adjustments to the Input/Output of major components.

Caution:

The factory default parameters are preset (country dependent) for optimum performance and in compliance with the local telecommunication regulations/standards, and do not need to be changed. Changing some of these parameters may cause the unit to be no longer compliant or become inoperable.

5.1.1. Service Mode Procedure

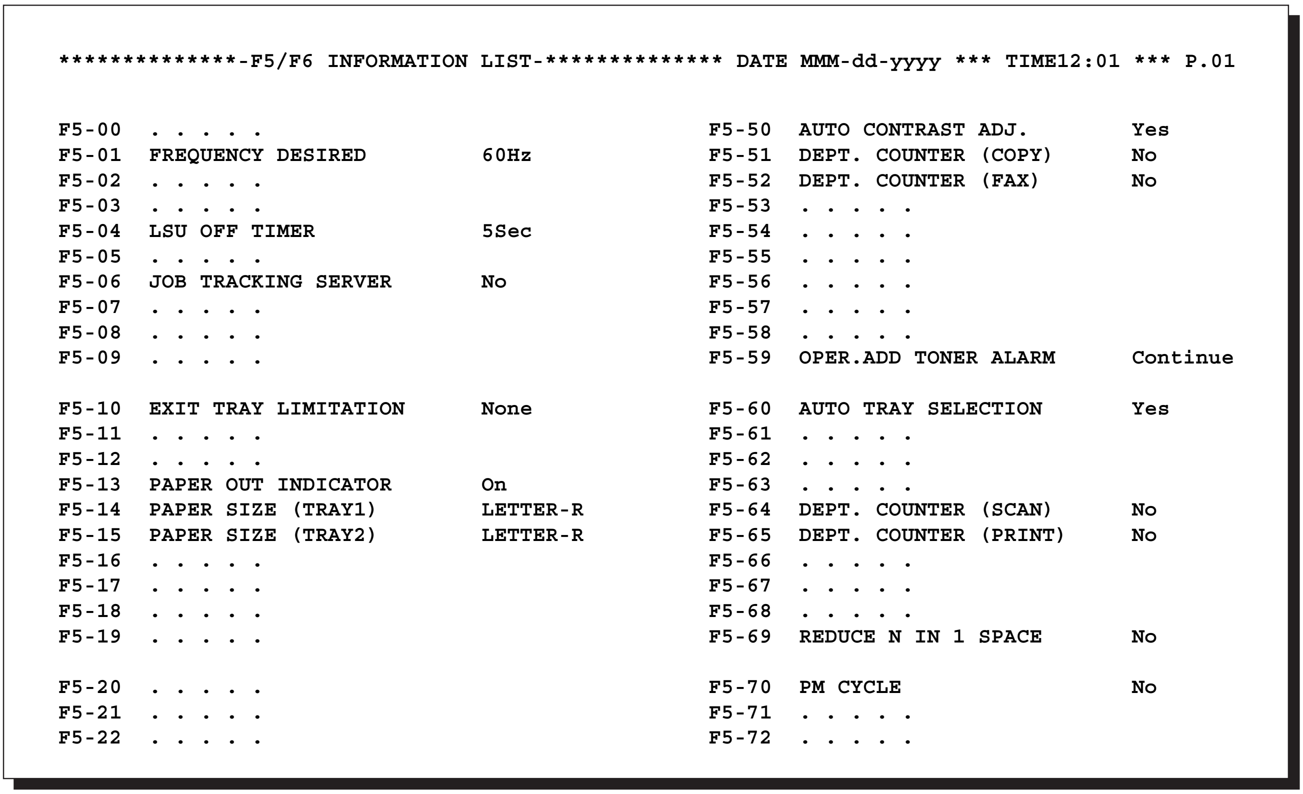
1. To select the Service Mode
   The service mode is selected when the **"Function"**, **"Original Size"** and the **"3"** keys are sequentially pressed, Input the ID to enter the Service Mode (default ID is **00000000**) and press the **"Set"** key, then F1 will appear in the display.
2. To exit the Service Mode
   The service mode is reset when the **"Function"** and the **"Clear"** keys are pressed sequentially.

5.1.2. Copier Service Mode Functions

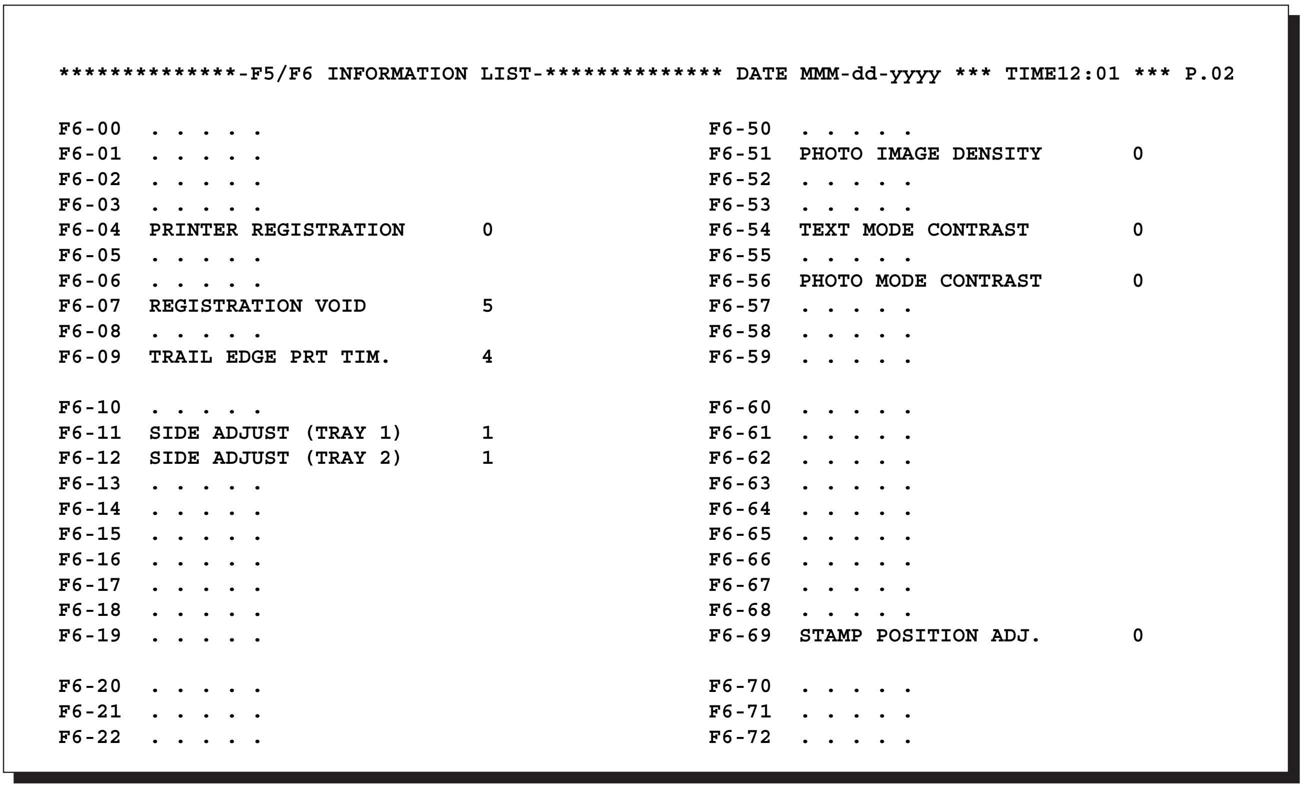
Service Modes (For Copier)

Service Mode	Item			Function
F1	SELF TEST	00	SCANNER LED TEST	This test is used for checking the Scanner LED.
		01	LCD/LED TEST	This test is used for checking the LCD and LEDs.
		02	PAGE MEMORY TEST	This test is used for checking the Page Memory.
		03	PRT TEST PTN. 1	Prints the pattern for setting the Paper position alignment.
		04	PRT TEST PTN. 2	Prints the Slant pattern for setting the Paper position alignment.
		05	PRT TEST PTN. 3	Prints the Grid pattern for setting the Paper position alignment.
F2	SINGLE COPY TEST			One sheet is copied when the Start key is pressed.
F3	CONTI. CPYTEST			Multi copies are made when the Start key is pressed.
F4	I / O STATUS TEST			The functioning of Input / Output items (selected item numbers) is checked.
F5	FUNC. PARAMETERS			Various function settings (selected by code numbers) can be changed.
F6	ADJ. PARAMETERS			Various function settings (selected by code numbers) can be adjusted.
F7	ELECTRONIC COUNTER			Electronic Counters for Maintenance
F8	SERVICE ADJ.			Perform pseudo-operation of an item (selected by code numbers)
F9	UNIT MAINTENANCE			Fax Service Mode Service Alert Tel # Firmware Version Print Device Info.

F5 / F6 Information List (Sample)

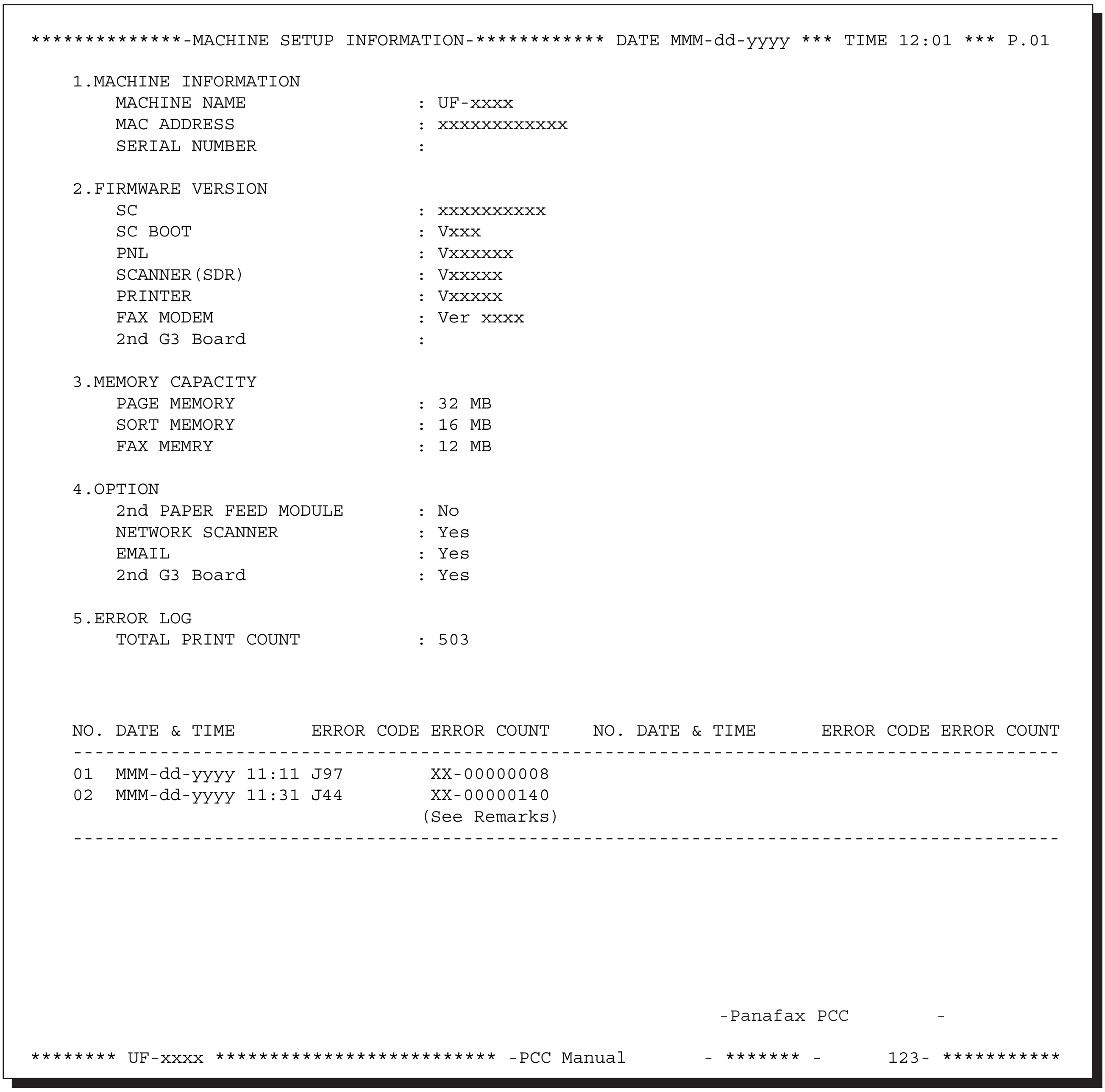


```
**************-F5/F6 INFORMATION LIST-************** DATE MMM-dd-yyyy *** TIME12:01 *** P.01


F5-00  . . . . .                                F5-50  AUTO CONTRAST ADJ.        Yes
F5-01  FREQUENCY DESIRED          60Hz          F5-51  DEPT. COUNTER (COPY)      No
F5-02  . . . . .                                F5-52  DEPT. COUNTER (FAX)       No
F5-03  . . . . .                                F5-53  . . . . .
F5-04  LSU OFF TIMER              5Sec          F5-54  . . . . .
F5-05  . . . . .                                F5-55  . . . . .
F5-06  JOB TRACKING SERVER        No            F5-56  . . . . .
F5-07  . . . . .                                F5-57  . . . . .
F5-08  . . . . .                                F5-58  . . . . .
F5-09  . . . . .                                F5-59  OPER.ADD TONER ALARM      Continue

F5-10  EXIT TRAY LIMITATION       None          F5-60  AUTO TRAY SELECTION       Yes
F5-11  . . . . .                                F5-61  . . . . .
F5-12  . . . . .                                F5-62  . . . . .
F5-13  PAPER OUT INDICATOR        On            F5-63  . . . . .
F5-14  PAPER SIZE (TRAY1)         LETTER-R      F5-64  DEPT. COUNTER (SCAN)      No
F5-15  PAPER SIZE (TRAY2)         LETTER-R      F5-65  DEPT. COUNTER (PRINT)     No
F5-16  . . . . .                                F5-66  . . . . .
F5-17  . . . . .                                F5-67  . . . . .
F5-18  . . . . .                                F5-68  . . . . .
F5-19  . . . . .                                F5-69  REDUCE N IN 1 SPACE       No

F5-20  . . . . .                                F5-70  PM CYCLE                  No
F5-21  . . . . .                                F5-71  . . . . .
F5-22  . . . . .                                F5-72  . . . . .
```



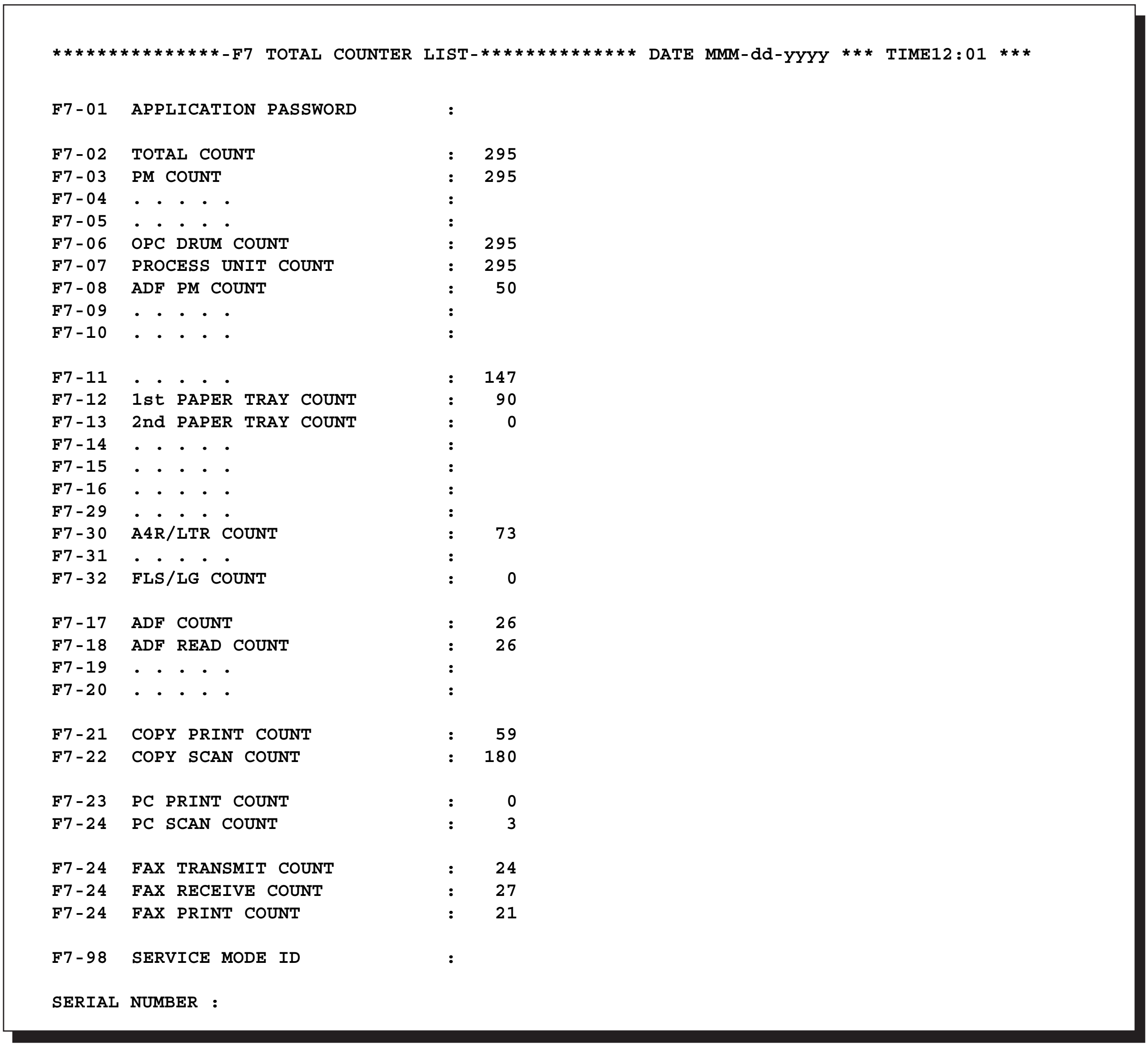
```
**************-F5/F6 INFORMATION LIST-************** DATE MMM-dd-yyyy *** TIME12:01 *** P.02

F6-00  . . . . .                                F6-50  . . . . .
F6-01  . . . . .                                F6-51  PHOTO IMAGE DENSITY       0
F6-02  . . . . .                                F6-52  . . . . .
F6-03  . . . . .                                F6-53  . . . . .
F6-04  PRINTER REGISTRATION       0             F6-54  TEXT MODE CONTRAST        0
F6-05  . . . . .                                F6-55  . . . . .
F6-06  . . . . .                                F6-56  PHOTO MODE CONTRAST       0
F6-07  REGISTRATION VOID          5             F6-57  . . . . .
F6-08  . . . . .                                F6-58  . . . . .
F6-09  TRAIL EDGE PRT TIM.        4             F6-59  . . . . .

F6-10  . . . . .                                F6-60  . . . . .
F6-11  SIDE ADJUST (TRAY 1)       1             F6-61  . . . . .
F6-12  SIDE ADJUST (TRAY 2)       1             F6-62  . . . . .
F6-13  . . . . .                                F6-63  . . . . .
F6-14  . . . . .                                F6-64  . . . . .
F6-15  . . . . .                                F6-65  . . . . .
F6-16  . . . . .                                F6-66  . . . . .
F6-17  . . . . .                                F6-67  . . . . .
F6-18  . . . . .                                F6-68  . . . . .
F6-19  . . . . .                                F6-69  STAMP POSITION ADJ.       0

F6-20  . . . . .                                F6-70  . . . . .
F6-21  . . . . .                                F6-71  . . . . .
F6-22  . . . . .                                F6-72  . . . . .
```

Machine Setup Information List (Sample)



```
**************-MACHINE SETUP INFORMATION-************ DATE MMM-dd-yyyy *** TIME 12:01 *** P.01

    1.MACHINE INFORMATION
        MACHINE NAME                : UF-xxxx
        MAC ADDRESS                 : xxxxxxxxxxxx
        SERIAL NUMBER               :

    2.FIRMWARE VERSION
        SC                          : xxxxxxxxxx
        SC BOOT                     : Vxxx
        PNL                         : Vxxxxxx
        SCANNER(SDR)                : Vxxxxx
        PRINTER                     : Vxxxxx
        FAX MODEM                   : Ver xxxx
        2nd G3 Board                :

    3.MEMORY CAPACITY
        PAGE MEMORY                 : 32 MB
        SORT MEMORY                 : 16 MB
        FAX MEMRY                   : 12 MB

    4.OPTION
        2nd PAPER FEED MODULE       : No
        NETWORK SCANNER             : Yes
        EMAIL                       : Yes
        2nd G3 Board                : Yes

    5.ERROR LOG
        TOTAL PRINT COUNT           : 503


    NO. DATE & TIME       ERROR CODE ERROR COUNT    NO. DATE & TIME       ERROR CODE ERROR COUNT
    -------------------------------------------------------------------------------------------
    01  MMM-dd-yyyy 11:11 J97        XX-00000008
    02  MMM-dd-yyyy 11:31 J44        XX-00000140
                                    (See Remarks)
    -------------------------------------------------------------------------------------------




                                                                  -Panafax PCC         -

******** UF-xxxx ************************** -PCC Manual        - ******* -      123- ***********
```

F7 Total Counter List (Sample)



```
***************-F7 TOTAL COUNTER LIST-************** DATE MMM-dd-yyyy *** TIME12:01 ***


F7-01  APPLICATION PASSWORD        :

F7-02  TOTAL COUNT                 :  295
F7-03  PM COUNT                    :  295
F7-04  . . . . .                   :
F7-05  . . . . .                   :
F7-06  OPC DRUM COUNT              :  295
F7-07  PROCESS UNIT COUNT          :  295
F7-08  ADF PM COUNT                :   50
F7-09  . . . . .                   :
F7-10  . . . . .                   :

F7-11  . . . . .                   :  147
F7-12  1st PAPER TRAY COUNT        :   90
F7-13  2nd PAPER TRAY COUNT        :    0
F7-14  . . . . .                   :
F7-15  . . . . .                   :
F7-16  . . . . .                   :
F7-29  . . . . .                   :
F7-30  A4R/LTR COUNT               :   73
F7-31  . . . . .                   :
F7-32  FLS/LG COUNT                :    0

F7-17  ADF COUNT                   :   26
F7-18  ADF READ COUNT              :   26
F7-19  . . . . .                   :
F7-20  . . . . .                   :

F7-21  COPY PRINT COUNT            :   59
F7-22  COPY SCAN COUNT             :  180

F7-23  PC PRINT COUNT              :    0
F7-24  PC SCAN COUNT               :    3

F7-24  FAX TRANSMIT COUNT          :   24
F7-24  FAX RECEIVE COUNT           :   27
F7-24  FAX PRINT COUNT             :   21

F7-98  SERVICE MODE ID             :

SERIAL NUMBER :
```

5.1.3. F4 Mode: Input/Output Status Test

Set the machine to Service Mode, and press the **“4”** key.

↓

Press the **“Start”** key to enter the F4 Service Mode.

↓

Select **“1:Check Input”** or **“2:Check Output”**, and press the **“Start”** key to activate the test.

↓

If you wish to cancel the test, press the **“Stop”** key.
When the **“Clear”** key is pressed, the selected code input will not be accepted.

↓

Press the **“Function”** and the **“Clear”** keys sequentially to exit the service mode.

1. Check Input

F4 Mode (Check Input)

No.	Function	Condition	Message Display								Remarks (Ref. No.)
			7	6	5	4	3	2	1	0	
030	ADF Read Point Sensor	Original is detected.							1		(312)
	ADF Paper Exit Sensor	Original is detected.						1			(312)
	ADF Cover Open Sensor	Cover is open.				1					(312)
031	ADF Document Sensor	Original is detected.								1	(312)

2. Check Output

Press the **“Start”** key to start and press the **“Stop”** key to reset.

F4 Mode (Check Output)

No.	Item	Function	Remark (Ref. No.)
120	Lamp	When the SDR PCB P705-9 signal level changes to 0V from 3.5V, Lamp operates.	The CIS shall be replaced as the Assembly
160	ADF Paper Feed Motor Rotating (STD speed rotating)	ADF paper feed motor rotates at STD speed.	(516)
161	ADF Paper Feed Motor Rotating (FINE speed rotating)	ADF paper feed motor rotates at FINE speed.	(516)
162	ADF Paper Feed Motor Rotating (S-FINE speed rotating)	ADF paper feed motor rotates at S-FINE speed.	(516)
163	ADF Paper Feed Motor Reverse Rotating (300dpi speed rotating)	ADF paper feed motor rotates in reverse at 300dpi speed.	(516)
164	ADF Paper Feed Motor Reverse Rotating (100% speed rotating)	ADF paper feed motor rotates in reverse at 100% speed.	(516)
165	ADF Paper Feed Motor Reverse Rotating (200% speed rotating)	ADF paper feed motor rotates in reverse at 200% speed.	(516)
175	ADF Stamp Solenoid	When the ADF PCB CN25-2 signal level changes to 0V from +24V, Solenoid operates for 1 second.	(424)

5.1.4. F5 Mode: Function Parameters (For Copier)

Set the machine to Service Mode, and press the **“5”** key.

↓

Press the **“Start”** key to enter the F5 Service Mode.

↓

Enter the desired code number, or press the “▼”, “▲” keys.
If you wish to select another code number, select the “▼”, “▲” keys.

↓

Press the **“Set”** key.

↓

Enter the desired function code number and press the **“Set”** key.
When the **“Clear”** key is pressed, the selected code input will not be accepted.

↓

Press the **“Stop”** key.

↓

Press the **“Function”** and the **“Clear”** keys sequentially to exit the service mode.

↓

Reboot the machine after setting the parameter(s) to activate the setting(s).

F5 Mode			
No.	**Item**	**Function**	**Default Setting**
00	Not Used		
01	FREQUENCY DESIRED	0 : Auto 1 : 50 Hz 2 : 60Hz	1 (for Europe) 2 (for USA / Canada) (for Taiwan)
02~03	Not Used		
04	LSU OFF TIMER	1 : 5 sec. 2 : 10 sec. 3 : 15 sec. 4 : 20 sec. 6 : 30 sec. 8 : 40 sec. 10 : 50 sec. 12 : 60 sec.	1
05	Not Used		
06	JOB TRACKING SERVER	0 : NO 1 : YES	0
07~09	Not Used		
10	EXIT TRAY LIMITATION	0 : None 1 : Accumulate 2 : Job	0
11~12	Not Used		
13	PAPER OUT INDICATOR	0 : On 1 : Off	0
14	PAPER SIZE (TRAY1)	4 : A4-R 12 : LEGAL 14 : LETTER-R	4 (for Europe / Others) 14 (for USA / Canada)
15	PAPER SIZE (TRAY2)	4 : A4-R 12 : LEGAL 14 : LETTER-R	4 (for Europe / Others) 14 (for USA / Canada)
16~39	Not Used		
40	DOUBLE COUNT	0 : No 2 : LGL	0

F5 Mode			
No.	**Item**	**Function**	**Default Setting**
41	COUNT UP TIMING	0 : At feed 1 : At exit	1
42	Not Used		
43	KEY COUNTER TIMING	0 : At feed 1 : At exit	0
44~49	Not Used		
50	AUTO CONTRAST ADJUST	0 : No 1 : Yes	1
51	DEPT. COUNTER (COPY)	0 : No 1 : Yes	0
52	DEPT. COUNTER (FAX)	0 : No 1 : Yes	0
53~58	Not Used		
59	OPER. ADD TONER ALARM	0 : Stop 1 : Continue	1
60	AUTO TRAY SELECTION	0 : No 1 : Yes	1
61~63	Not Used		
64	DEPT. COUNTER (SCAN)	0 : No 1 : Yes	0
65	DEPT. COUNTER (PRINT)	0 : No 1 : Yes	0
66~68	Not Used		
69	REDUCE N IN 1 SPACE	0 : No 1 : Yes	0
70	PM CYCLE	0 : No 1 : 1.5 K 2 : 2.5 K 3 : 5 K 4 : 10 K 5 : 15 K 6 : 20 K 7 : 30 K 8 : 40 K 9 : 60 K 10 : 85 K 11 : 90 K 12 : 120 K 13 : 150 K 14 : 200 K 15 : 240 K	0
71~74	Not Used		
75	FUSER TEMP SWITCHING	1 : Paper1 (Low Temp. for Thin Paper) 2 : Paper2 (Normal Temp.) 3 : Paper3	2
76~78	Not Used		
79	IMAGE PROCESS METHOD	0 : Errordif 1 : Dither	0
80	Not Used		
81	FOOLSCAP SIZE	0 : B4 1 : FLS1 2 : FLS2	0 (for Taiwan) 1

F5 Mode			
No.	**Item**	**Function**	**Default Setting**
82~83	Not Used		
84	PAPER TRAY PRIORITY	0 : S > C 1 : C > S	1
85	SIDE VOID (ADF)	0 : No 1 : Yes	0
86	PM CYCLE (OPTICS)	0 : No 1 : 40 K 2 : 60 K 3 : 120 K 4 : 240 K 5 : 360 K 6 : 480 K 7 : 600 K	0
87	PM CYCLE (ADF)	0 : No 1 : 40 K 2 : 60 K 3 : 120 K 4 : 240 K 5 : 360 K 6 : 480 K 7 : 600 K	0
88	USB PORT FUNCTION	0 : Off 1 : Once 2 : On	0
89	LAN SPEED/DUPLEX	0 : Auto 1 : 10 Half 2 : 10 Full 3 : 100 Half 4 : 100 Full	0
90	BEEP SOUND	0 : Off 1 : Soft 2 : Loud	1
91~94	Not Used		
95	PAPER SIZE(FA) **(Factory use only)**	0 : Japan 1 : USA/CAN 2 : Europe 3 : Other	1 (for USA / Canada) 2 (for Europe) 3 (for Taiwan)
96~97	Not Used		

5.1.5. F6 Mode: Adjust Parameters (For Copier)

Set the machine to Service Mode, and press the **“6”** key.

↓

Press the **“Start”** key to enter the F6 Service Mode.

↓

Enter the desired code number, or press the “▼”, “▲” keys.
If you wish to select another code number, press the “▼”, “▲” keys.

↓

Press the **“Set”** key.

↓

Enter the desired function code number and press the **“Set”** key.
When the **“Clear”** key is pressed, the selected code input will not be accepted.

↓

Press the **“Stop”** key.

↓

Press the **“Function”** and the **“Clear”** keys sequentially to exit the service mode.

↓

Reboot the machine after setting the parameter(s) to activate the setting(s).

Note:

1. The Factory Setting is different for each model.
2. To change the input value +/-, press the “◀”, “▶” keys.
3. The machine may accept a (+/-) input value that exceeds the specified Setting Range for the parameters in the table; however, the actual registered value will not exceed the Upper/Lower Limitation value.

F6 Mode

No.	Item	Remarks	Setting Range
00~03	Not Used		
04	PRINTER REGISTRATION	Delay time is adjusted from registration roller clutch ON timing.	-50 ~ +16 0.5mm
05~06	Not Used		
07	REGISTRATION VOID	Lead Edge Void can be adjusted.	0 ~ +99 0.5mm
08	Not Used		
09	TRAIL EDGE PRT TIM.	Adjustment of trail edge void.	-9 ~ +15 0.5mm
10	Not Used		
11	SIDE ADJUST (TRAY 1)	Adjustment of LSU side-side (1st Tray).	-8 ~ +7 0.5mm
12	SIDE ADJUST (TRAY 2)	Adjustment of LSU side-side (2nd Tray).	-8 ~ +7 0.5mm
13~38	Not Used		
39	LSU UNIT PWM ADJUST	Adjustment of PWM value of LSU.	-32 ~ +32
40	TRANS CURRENT	Adjustment of Transfer Current.	-77 ~ +76 0.15uA
41~43	Not Used		
44	FAX LASER DUTY ADJ.	Printer Density Adjustment for FAX. (-) : Darker. (+) : Lighter.	-99 ~ +99
45	Not Used		

F6 Mode			
No.	**Item**	**Remarks**	**Setting Range**
46	PRINTER LASER DUTY ADJ.	Printer Density Adjustment for Printer. (-) : Darker. (+) : Lighter.	-99 ~ +99
47~48	Not Used		
49	TEXT IMAGE DENSITY	Image density adjustment for Text mode. (-) : Darker. (+) : Lighter.	-99 ~ +99
50	Not Used		
51	PHOTO IMAGE DENSITY	Image density adjustment for Photo mode. (-) : Darker. (+) : Lighter.	-99 ~ +99
52~53	Not Used		
54	TEXT MODE CONTRAST	Adjustment of Contrast for Text Mode.	-128 ~ +127
55	Not Used		
56	PHOTO MODE CONTRAST	Adjustment of Contrast for Photo Mode.	-128 ~ +127
57~68	Not Used		
69	STAMP POSITION ADJ.	Adjustment of verification stamp position.	-50 ~ +50 0.3mm
70~90	Not Used		
91	ORIGINAL LEAD ADF	Adjustment of original detection timing.	-99 ~ +99 0.3mm
92	ORIGINAL TRAIL ADF	Adjustment of trail edge detection timing.	-90 ~ 127 0.3mm
93~98	Not Used		
99	F5/F6 INITIALIZE	Initialize F5/F6 parameter settings.	

5.1.6. F7 Mode: Electronic Counter

Set the machine to Service Mode, and press the **“7”** key.

↓

Press the **“Start”** key to enter the F7 Service Mode.

↓

Enter the desired code number, or press the “▼”, “▲” keys.
If you wish to select another code number, press the “▼”, “▲” keys.

↓

Press the **“Set”** key.

↓

Enter the desired function code number and press the **“Set”** key.
When the **“Clear”** key is pressed, the selected code input will not be accepted.

↓

Press the **“Stop”** key.

↓

Press the **“Function”** and the **“Clear”** keys sequentially to exit the service mode.

↓

Reboot the machine after setting the parameter(s) to activate the setting(s).

F7 Mode		
No.	**Item**	**Remarks**
01	APPLICATION PASSWORD	Password for Firmware Version update, Print job queue functions, and various PC application operations.
02	TOTAL COUNT	Total count for all copies / prints.
03	PM COUNT	Preventive Maintenance count.
04~05	Not Used	
06	OPC DRUM COUNT	PM count of the OPC Drum.
07	PROCESS UNIT COUNT	PM count of Process Unit.
08	ADF PM COUNT	PM count of originals fed through the ADF.
09~11	Not Used	
12	1st PAPER TRAY COUNT	Total count of paper fed from the 1st paper tray.
13	2nd PAPER TRAY COUNT	Total count of paper fed from the 2nd paper tray.
14~16	Not Used	
17	ADF COUNT	Total count of originals fed through the ADF.
18	ADF READ COUNT	Total count of originals scanned through the ADF.
19~20	Not Used	
21	COPY PRINT COUNT	Total count of copies printed.
22	COPY SCAN COUNT	Total count of copies scanned.
23	PC PRINT COUNT	Total count printed from PC.
24	PC SCAN COUNT	Total count scanned to PC.
25	FAX TRANSMIT COUNT	Total count of Fax transmitted.
26	FAX RECEIVE COUNT	Total count of Fax received.
27	FAX PRINT COUNT	Total count of Fax printed.
28~29	Not Used	
30	A4R/LTR COUNT	Total count of A4-R / Letter-R Print.
31	Not Used	
32	FLS/LG COUNT	Total count of FLS / Legal Print.
98	SERVICE MODE ID	Identification Code for Service Mode.
99	ALL COUNTER CLEAR	All counters are cleared.

5.1.7. F8 Mode: Service Adjustment

Set the machine to Service Mode, and press the **“8”** key.

↓

Press the **“Start”** key to enter the F8 Service Mode.

↓

Enter the desired code number, or press the “▼”, “▲” keys.
If you wish to select another code number, press the “▼”, “▲” keys.

↓

Press the **“Set”** key.

↓

Enter the desired function code number and press the **“Set”** key.
When the **“Clear”** key is pressed, the selected code input will not be accepted.

↓

Press the **“Stop”** key.

↓

Press the **“Function”** and the **“Clear”** keys sequentially to exit the service mode.

↓

Reboot the machine after setting the parameter(s) to activate the setting(s).

F8 Mode		
No.	**Item**	**Remarks**
00~05	Not Used	
06	Error Log View	Each time the arrow key is pressed, the machine errors or paper jam codes stored in memory are displayed, beginning with the oldest code. **Note:** Only the 30 most recent codes are displayed.
07	Error Log Clear	Press the Start key.
08~17	Not Used	
18	C18 PRT PWM ADJ.PTN. (LSU PWM Pattern)	Print out the Test Pattern. Proceed when the LSU is replaced.
19~46	Not Used	
47	C47 ADF Scan Test	Place the document on the ADF first. Press Start key to begin.
48~54	Not Used	

5.1.8. F9 Mode: Unit Maintenance

Set the machine to Service Mode, and press the **“9”** key.

↓

Press the **“Start”** key to enter the F9 Service Mode.

↓

Enter the desired code number, or press the “▼”, “▲” keys.
If you wish to select another code number, press the “▼”, “▲” keys.

↓

Press the **“Set”** key.

↓

Enter the desired function code number and press the **“Set”** key.
When the **“Clear”** key is pressed, the selected code input will not be accepted.

↓

Press the **“Stop”** key.

↓

Press the **“Function”** and the **“Clear”** keys sequentially to exit the service mode.

↓

Reboot the machine after setting the parameter(s) to activate the setting(s).

F9 Mode						
Service Mode	**Item**					**Remarks**
F9	UNIT MAINTENANCE	00	FAX FUNC.PARA			
		01	SVC. ALERT TEL #			Displays the contact number when a machine malfunction occurs.
		02	FIRMWARE VERSION	00	SC	Displays the firmware version for SC.
				01	SC BOOT	Displays the firmware version for SC Boot.
				02	PNL	Displays the firmware version for PNL.
				03	SCANNER	Displays the firmware version for Scanner.
				04	PRINTER	Displays the firmware version for Printer or engine.
				05	FAX MODEM	Displays the firmware version for FAX.
				06	G3B BOARD	Displays the firmware version for G3B.
		03	PRINT DEVICE INFO.	00	F5/F6 PARAMETERS	Prints the memory contents of the F5 and F6 modes.
				01	MACHINE INFO.	Prints the machine setup information list.
				02	COUNTER INFO.	Prints the Counter information list.
				03	SYSTEM ADDR. INFO.	Prints the system memory setting.
				04	RAM ADDR. INFO.	Prints the RAM data dump list.
		04	RAM EDIT MODE	1	RELATIVE ADRS MODE	Setting of Relative address.
				2	ABSOLUTE ADRS MODE	Setting of Real address.

F9 Mode						
Service Mode	**Item**					**Remarks**
F9	UNIT MAINTENANCE	05	SERIAL NUMBER			Registration of Serial Number for Maintenance. Clears with Shipment Set.
		06	RAM INITIALIZE	00	PARAMETER INITIALIZE	Resets the Fax and Function parameters to default values.
				01	ALL JOB CLEAR	Clears all Jobs stored in Flash Memory.
				02	LBP ERROR LOG CLEAR	Clears LBP Error log
				03	SHIPMENT SET	Clears All Jobs, All Preset Data, Parameter Initialize & Resets the Counters (Fax).
				04	LBP FUSER RESET	Clears the LBP fuser error.
				05	DEPT. COUNTER CLEAR	Clears the Dept. Counter.
				06	FLASH MEMORY CLEAR	Clears the Flash Memory.
		07	FIRMWARE UPDATE	00	UPDATE FROM CARD	Updates the firmware in the machine with the Master Firmware SD Memory Card.
				01	UPDATE FROM USB	Updates the firmware in the machine using a PC via the USB port.
		08 ~ 10	Not Used			
		11	PARAMETER BACKUP			Backup the Parameter.
		12	PARAMETER RESTORE			Restore the Parameter.
		13	PAGE MEMORY SIZE			Displays the page memory size (MB).
		14	SORT MEMORY SIZE			Displays the sort memory size (MB).
		15	SD CARD FORMAT			Format the SD Memory Card.

5.2. Service Modes (For Facsimile)

Caution:

The factory default parameters are preset (country dependent) for optimum performance and in compliance with the local telecommunication regulations/standards, and do not need to be changed. Changing some of these parameters may cause the unit to be no longer compliant or become inoperable.

5.2.1. Fax Service Mode Procedure

1. To enter the Fax Service Mode
   a. Press the **“Function”** and the **“7”** keys.
   b. Press the **“Monitor”** key four times.
   c. Press the **“* (Tone)”** key.
   d. Input the ID, and press the **“Set”** key to enter the Service Mode (default ID is **00000000**).
   e. Enter the desired code number, or press the “▼”, “▲” keys.
2. To exit the Fax Service Mode
   Press the **“Stop”** key.

Note:

The following buttons provide these functions in the Service Mode:

“Start” : The new setting value is stored in the machine.
“▼” : Scroll the function parameter number down.
“▲” : Scroll the function parameter number up.

5.2.2. FAX Service Mode Table

The following service modes are provided to assist you in setting operational functions of the unit and determining the condition of the unit.

No.	Service Mode	Description
00	Not Used	
01	PARAMETER SET	Allows changes to the function parameters (the home position, etc.).
02	RAM EDIT MODE	**Factory use only.**
03	PRINT REPORT / LIST	Prints the Function Parameter List, Page Memory Test, Printer Report, All Document File, Protocol Trace and Toner Order Form.
04	MODEM TEST	Generates various binary, tonal and DTMF signals, by the modem.
05	Not Used	
06	RAM INITIALIZE	Initialize RAM and restore the default value of the function parameters. **Note:** Turn the Power Switch to the **OFF** and back to the **ON** position to enable the parameter settings.
07	Not Used	
08	CHECK & CALL	Allows input of information for Service Alert Report, Maintenance Alert Report and Toner Order Form.
09	SYSTEM MAINTENANCE	Used for Firmware Update, Parameter Restore, Parameter Backup and Sending a Received File during a fatal printer error.
10	FIRMWARE VERSION	Displays Firmware Version for SC, SC Boot, Panel, etc.

5.2.3. Fax Service Mode 1 (Function Parameter Setting)

Use the following procedure to change the function parameters.

Enter the desired code number and press the **“Start”** key.
If you wish to select another code number, press the “▼”, “▲” keys.
↓
Select the desired function code and press the **“Start”** key.
When the **“Clear”** key is pressed, the selected code input will not be accepted.
↓
Press the **“Stop”** key.
↓
Press the **“Stop”** key to exit the service mode.

Function Parameter Table

No.	Parameter	Selections	Function
000	MON/TEL DIAL	1 = Monitor 2 = Tel/Dial	Selects whether the machine starts to TX automatically during On-Hook dialing. **Monitor** : Start to TX after pressing Start **TEL/DIAL** : Start to TX automatically
001	ALARM STATUS	1 = Off 2 = Timer 3 = Constant	Selects the No Paper or No Toner alarm status. **OFF** : Alarm is disabled. **Timer** : Alarm will shut off after 6 seconds. **Constant** : Alarm will not stop until “Stop” is pressed or the error is cleared/corrected.
002	STOP COMM. JRNL	1 = Off 2 = On	Selects whether the machine prompts to print the COMM. Journal when the printout condition is set to INC and Stop is pressed during communication.
003	CONTINUOUS POLL	1 = Off 2 = Stn (Tx only) 3 = Hub (Rx only)	Selects whether the Continuous Polling feature is enabled. **Stn** : Place the document(s) on the ADF, then press the assigned One-Touch Key to store or add the documents into a polled file. (See Note 1) **Hub** : When the polling command is initiated, the machine will continuously poll originals from the remote stations until it is interrupted by pressing "Stop".
004	NUMERIC ID SET	1 = Off (will not accept) 2 = On (accepts)	Selects whether the machine accepts and allows to set or change the Numeric ID.

Function Parameter Table			
No.	**Parameter**	**Selections**	**Function**
005	Destination Code (UF-8300/7300 only)	000 : Austria 001 : U.K. 002 : Canada 003 : Denmark 005 : Finland 007 : Netherlands 008 : Italy 009 : Spain 010 : Hong Kong 011 : Australia 012 : Switzerland 013 : Norway 015 : Portuguese 016 : Ireland 017 : Belgium 018 : Sweden 019 : Turkey 020 : U.S.A. 022 : New Zealand 025 : Japan 029 : Poland 030 : Czech 031 : Russia 032 : Greece 033 : Hungary 034 : Indonesia 035 : South Korea 038 : Malaysia 039 : China 045 : Thailand 048 : South Africa 049 : Singapore 050 : Universal 051 : East Euro 999 : Initialize	Specified destinations only.
006	ID DISPLAY	1 = Number (Numeric ID) 2 = Chara (Character ID) 3 = Name (Station Name) 4 = Dial (Dialing Number)	Selects the priority of displaying/Printing the ID, Name or Dialing Number. (Default : 3 = Name) 1 = Number : Number>Name>Chara>Dial 2 = Chara : Chara>Name>Number>Dial 3 = Name : Name>Chara>Number>Dial 4 = Dial : Dial>Name>Chara>Number
007	Not Used		
008	MONITOR	1 = Off 2 = On	Selects whether the Monitor is ON/OFF for monitoring fax signals. The 2nd G3 port is also available. **(FOR SERVICE USE ONLY)**
009	DC LOOP	1 = Off (Normal) 2 = On (Off Hook)	Selects a false Off Hook state for back to back communication test.
010	TX LEVEL	00 = 0 dBm ~ 15 = -15 dBm	Selects the TX signal output level, 0 to -15 dBm in 1 dBm steps.

Function Parameter Table			
No.	**Parameter**	**Selections**	**Function**
011	RX LEVEL	1 = -43 dBm 2 = -38 dBm 3 = -33 dBm 4 = -48 dBm	Selects the receiving sensitivity of -33/-38/-43/-48 dBm.
012	DTMF LEVEL	00 = 0 dBm ~ 15 = -15 dBm	Selects the DTMF output level, 0 to -15 dBm in 1 dBm steps.
013	G3 RX EQL	1 = 0dB 2 = 4dB 3 = 8dB 4 = 12dB	Selects the cable equalizer for G3 reception mode, 0dB, 4dB, 8dB or 12dB.
014	G3 TX EQL	1 = 0dB 2 = 4dB 3 = 8dB 4 = 12dB	Selects the cable equalizer for G3 transmission mode, 0dB, 4dB, 8dB or 12dB.
015~ 016	Not Used		
017	TX START	2400 bps 4800 bps 7200 bps 9600 bps TC7200 bps TC9600 bps 12000 bps 14400 bps	Selects the transmission modem start speed, 14400/ 12000/TC9600/TC7200/9600/7200/4800/2400 bps. (Press the "▼", "▲" keys to select the symbol rate.) **Note:** This parameter is applicable only when communicating with regular G3 machines. When communicating with Super G3 (V.34) machines, use Parameter No. 32.
018	RX START	2400 bps 4800 bps 7200 bps 9600 bps TC7200 bps TC9600 bps 12000 bps 14400 bps	Selects the reception modem start speed, 14400/ 12000/TC9600/TC7200/9600/7200/4800/2400 bps. (Press the "▼", "▲" keys to select the symbol rate.) **Note:** This parameter is applicable only when communicating with regular G3 machines. When communicating with Super G3 (V.34) machines, use Parameter No. 33.
019	ITU-T V.34	1 = Off 2 = On 3 = Select	Selects whether the ITU-T V.34 is Off, On or Select. **Select:** Select whether the ITU-T V.34 is Off or On, when entering Phone Book Dialing Numbers or Manual Number Dialing.
020	ITU-T ECM	1 = Off (Invalid) 2 = On (Valid)	Select the ECM mode. **Note:** When communicating with V.34, the ECM mode becomes effective automatically regardless of this parameter setting.
021	EP TONE	1 = Off (without EP Tone) 2 = On (with EP Tone)	Selects whether to add the echo protect tone on V.29 mode. (Used when Echo Suppression is disabled.) **On** : Add **Off** : Do not add
022	SIG. INTERVAL	1 = 100 ms 2 = 200 ms 3 = 500 ms	Selects the time interval between the receiving signal and the transmitting signal.
023	TCF CHECK	1 = Normal (Short) 2 = Long	Selects the TCF check interval Long/Short

Function Parameter Table			
No.	**Parameter**	**Selections**	**Function**
024	CED FREQ.	1 = 1080 Hz (non ITU-T) 2 = 2100 Hz	Selects the CED frequency 2100/1080 Hz
025	COMM. START-UP	1 = First 2 = Second	Selects the communication start-up condition (XMT and Polling). (Used when Echo Suppression is disabled.)
026	NON-STANDARD	1 = Off (Invalid) 2 = On (Valid)	Selects own mode (Panafax mode).
027	SHORT PROTOCOL B	1 = Off (Invalid) 2 = On (Valid)	Selects the short protocol mode.
028	SHORT PROTOCOL D	1 = Off (Invalid) 2 = On (Valid)	Selects the short protocol mode. When activated, it allows the machine to automatically store the modem speed for each Auto Dial Number.
029	REMOTE DIAG.	1 = Off (will not accept) 2 = On (accepts)	Selects whether the machine accepts Remote Diagnostics from the service station.
030	CED & 300 bps	1 = 75 ms 2 = 1 sec	Selects the pause interval between the CED and the 300 bps signal. (Used when Echo Suppression is disabled.)
031	RTC = EOL x 12	1 = Off (EOLx6) 2 = On (EOLx12)	Selects the RTC signal, EOLx6 or EOLx12.
032	V34 TX START	2400-33600bps	Selects the transmission modem start speed for V.34 communication, 33600-2400 bps. (Press the "▼", "▲" keys to select the symbol rate.)
033	V34 RX START	2400-33600bps	Selects the receiving modem start speed for V.34 communication, 33600-2400 bps. (Press the "▼", "▲" keys to select the symbol rate.)
034	V34 TX SR	2400-3429sr	Selects the transmission symbol rate for V.34, 3429/3200/3000/2800/2400 sr. (Press the "▼", "▲" keys to select the symbol rate.)
035	V34 RX SR	2400-3429sr	Selects receiving symbol rate for V.34, 3429/3200/3000/2800/2400 sr. (Press the "▼", "▲" keys to select the symbol rate.)
036	Not Used		
037	PROTOCOL DISDPLAY	1 = Off (not displayed) 2 = On (displayed)	Selects whether to display the modem speed during communication. (Press the Job Status Key to display)
038	Not Used		
039	FLASH TIME	5 = 50 ms ~ 100 = 1000 ms	Selects the pause interval before activating the Flash key.
040	FLASH TIME (PSTN)	5 = 50 ms ~ 100 = 1000 ms	Selects the pause interval before activating the Flash key. (For Germany, Austria and Czech)
041	PAUSE TIME	1 = 1 sec. ~ 10 = 10 sec.	Selects the pause interval from 1 sec. ~ 10 sec. for dialing through a switchboard or for international calls.
042	Not Used		
043	REDIAL INTERVAL	0 = no waiting ~ 15 = 15 minutes	Selects the redial interval from 0 to 15 minutes in 1 minute steps.

Function Parameter Table

No.	Parameter	Selections	Function
044	REDIAL COUNT	0 = no redial ~ 15 = 15 times	Selects the redial count from 0 to 15 times in 1 step intervals. **Note:** In order to comply with the TBR21 requirement for the EC destinations, do not select 15 times.
045	RING DET. COUNT	1 = 1 ring ~ 9 = 9 rings	Selects the ring detection count from 1 to 9 rings in 1 ring step intervals.
046	ON-HOOK TIME	0 = 0 sec. ~ 90 = 90 sec.	Selects the on-hook time between sequential communication calls in 1 second step intervals.
047	RESPONSE WAIT	1 = 1 sec. ~ 90 = 90 sec. 20 ~ 150 sec. (For France Only)	Selects the waiting interval for the response after completing the dialing.
048~ 049	Not Used		
050	RING DET. MODE	1 = Normal 2 = Rough	Selects the quality of ringer detection. Use if the line signal is out of regulation, set to "Rough" so that the unit may detect the ringing signals.
051	Not Used		
052	PULSE RATE	1 = 10 pps 2 = 20 pps	Selects the dial pulse rate 10/20 pps.
053~ 054	Not Used		
055	BUSY TONE CHECK	1 = Off 2 = On	Selects whether to detect the Busy Tone.
056	DIAL TONE CHECK	1 = Off 2 = On	Selects whether to detect Dial Tone before dialing the telephone number.
057	DC LOOP CHECK (Except for USA and Canada)	1 = Off 2 = On	Selects whether the unit checks the DC Loop during communication.
058	COMM.JNL + IMAGE	1 = Off (without image) 2 = On (with image)	Selects whether the machine prints the COMM. Journal with image.
059	Not Used		
060	VERSION	Indicates the Host software version.	
061	TX/RX/PRT/CPY	TX:****** PRT:****** RX:****** CPY:******	Displays the transmitted, received, total printed and copied document count.
062	PRINT COUNTER	1 = Off 2 = On	Selects whether to print in the Fax Parameter List, the counter information that is displayed in the Function Parameter No. 61.
063~ 067	Not Used		

Function Parameter Table			
No.	**Parameter**	**Selections**	**Function**
068	NYSE FAX FORWARD (USA and Canada Only)	1 = Off 2 = On	Selects whether the machine will forward the incoming and outgoing faxes to a specified station. **Note:** Once this parameter is activated, Fax Forwarding via Fax Parameter 054 is automatically disabled, an Access Code of "0000" is automatically assigned and Fax Parameter 038 has a new setting added called "NYSE".
069	NYSE LOCAL PRINT (USA and Canada Only)	1 = Inc 2 = On (Always)	Selects the printing condition for the incoming faxes after FAX Forwarding. **INC.** : Prints only if FAX Forwarding fails. **ON** : Always prints.
070	LINE ERROR	128 lines 256 lines 512 lines 1024 line 2048 lines Off (will not disconnect line)	1. Selects the line disconnect condition during reception. If the number of line errors exceed this setting, the unit will disconnect the line. Press the "▼", "▲" keys to select the symbol rate. 2. Selects the transmit condition of RTP/PIP or RTN/PIN. (Available if No.73 Error Detect is set to "LINES") (See Note 1)
071	TOTAL ERROR	1 = 5% 2 = 10% 3 = 15% 4 = 20%	Selects the transmit condition of RTP/PIP or RTN/PIN. (Available if No.73 Error Detect is set to "RATE".) (See Note 2)
072	CONTI. ERROR	1 = Off (unlimited) 2 = 3 lines/STD 3 = 6 lines/STD 4 = 12 lines/STD	Selects the continuous total error criteria of Off/3/6 or 12 lines in Standard mode. If continuous total error exceeds this setting, the unit will transmit RTN/PIN. (Available if No.73 Error Detect is set to "RATE".)
073	ERROR DETECT	1 = Lines 2 = Rate	Selects the error detect condition Lines/Rate.
074	RTN RECEIVE	1 = Disconnect 2 = Continue	Selects whether to disconnect the phone line or continue when "RTN" is received.
075	CODING	1 = MH (MH only) 2 = MR (MH or MR) 3 = MMR (MH, MR or MMR) 4 = JBIG	Selects the coding scheme.
076	BATCH TX	1 = Off 2 = On	Selects whether the batch transmission is available.
077	RX JAM LENGTH	1 = Off (unlimited) 2 = 2 m	Selects the maximum length of a received document that can be printed.
078~079	Not Used		
080	DOC TOP FEED	-99 ~ +99	Adjusts the distance between the scanning sensor ON position and the scanning start position.
081	DOC END FEED	-90 ~ +127	Adjusts the distance between the scanning sensor OFF position and the scanning end position.
082	JAM LENGTH	1 = 1 m 2 = 2 m	Selects the maximum length of the original that can be scanned.
083	Not Used		

Function Parameter Table

No.	Parameter	Selections	Function
084	LINE AS NO PAPER	1 = Ring (ring) 2 = Busy (keep line busy)	Selects whether to ring or send a busy tone to the remote station when the recording paper runs out or the unit cannot receive because of any trouble.
085~086	Not Used		
087	DARKER LEVEL	0 = Lightest Contrast ~ 15 = Darkest Contrast	Selects the contrast level of original. 0← →15 Lightest← →Darkest
088	NORMAL LEVEL		
089	LIGHTER LEVEL		
090~091	Not Used		
092	SMOOTHING	1 = Off 2 = On	Selects whether the smoothing function is available.
093~094	Not Used		
095	REDUCTION RATIO	(70-100)	Selects Print Reduction Ratio(%).
096~109	Not Used		
110	MAC ADRESS		Indicates the MAC Address.
111	Not Used		
112	INSERT EMAIL TXT	1 = Off 2 = On	Selects whether the Text Template (email message) is programmable and added on all email sent in the message body above the top line of text. (Up to 40 characters can be programmed in the User Parameters.) **Note:** After enabling this feature, aside from entering the text in the User Parameters, it also has to be activated in each Auto Dial Number before it will take effect. It does not work for Direct Dialed Numbers.
113~114	Not Used		
115	TIME ZONE	1 = Scroll 2 = Direct	Selects the setting method for Time Zone. **Scroll** : Allows using "Scroll Keys" to scroll through the Time Zone Table. **Direct** : Allows you to input the Time Zone directly, (*) key to be used as a switch between +/-.
116	OVERWRITE WARNING	1 = Yes 2 = No	Selects whether the Overwrite Warning is included on the Internet FAX Result Receipt when programming the Auto Dialer via email.
117~119	Not Used		
120	FORWARD ALL COM. (Euro and Other Destinations)	1 = Off 2 = On	
121	FAC LOCAL PRINT (Euro and Other Destinations)	1 = Inc 2 = ON(ALWAYS)	

Function Parameter Table			
No.	**Parameter**	**Selections**	**Function**
122	LDAP	1 = Off 2 = On	Selects whether to use the LDAP Server. Special characters used in the LDAP, may not be recognized and display incorrectly.
123	ONE RING SOUND (USA and Canada Only)	1 = Off 2 = On	When Function Parameter No. 45 "Ring Detect Count" is set to 1 Ring, and this parameter is enabled (On), the machine will only ring once out loud, answering on the second ring count.
124~ 199	Not Used		
200~ 299	-		See Note 5

Note 1: Continuous Polling (Station Mode)

This feature allows you to Store or Add documents into a Polled file in memory.

To enable the Continuous Polling feature set the **Function Parameter No. 003** to **"2:STN"** (Station).

Depending on the setting of the **User Parameter (Facsimile) "No. 119: QWERTY KEYBOARD"**, one of the following operations is available:.

1. One-Touch

The upper "40" (40↑) Key is reserved for "Store 4 Polling" function, and cannot be changed.

To prepare document(s) to be polled, simply place the document(s) on the ADF, then press the "-" (40) Key on the Keyboard (40↑ = LOWER Indicator turned OFF) to Store or Add document(s) into a Polled file.

2.Quick Name Search

Press "S" (13) Key to search the "Store 4 Polling" name instead.

To prepare document(s) to be polled, simply place the document(s) on the ADF and press the "S" (13) Key to search for "Store 4 Polling", then press the "Start" Key to Store or Add document(s) into a Polled file.

(**Note:** If a regular polled file is stored in memory, the Program Key for Continuous Polling will not be accepted.)

Note 2: Function Parameter No. 070 (Line Error)-Transmit condition of RTP/PIP or RTN/PIN

Signal	**Setting**					
	1:128	**2:256**	**3:512**	**4:1024**	**5:2048**	**6:Off**
MCF/PIP	0-31	0-63	0-127	0-255	0-511	Always
RTP/PIP	32-63	64-127	128-255	256-511	512-1023	-
RTN/PIN	64-127	128-255	256-511	512-1023	1024-2047	-

Note 3: Function Parameter No. 071 (Total Error)-Transmit condition of RTP/PIP or RTN/PIN

Signal	**Setting**			
	1:5%	**2:10%**	**3:15%**	**4:20%**
MCF/PIP	0-2	0-4	0-7	0-9
RTP/PIP	3-4	5-9	8-14	10-19
RTN/PIN	5-	10-	15-	20-

Note 4: The default setting of parameters depends on the country's specifications or regulations. Print the Function Parameter List to confirm the default settings.

Note 5: 200 Series Function Parameters Only appear when the G3 Communications Port Kit is installed and follow the same numbering order.

5.2.4. Fax Service Mode 3 (Printout of Lists, Reports and Test Results)

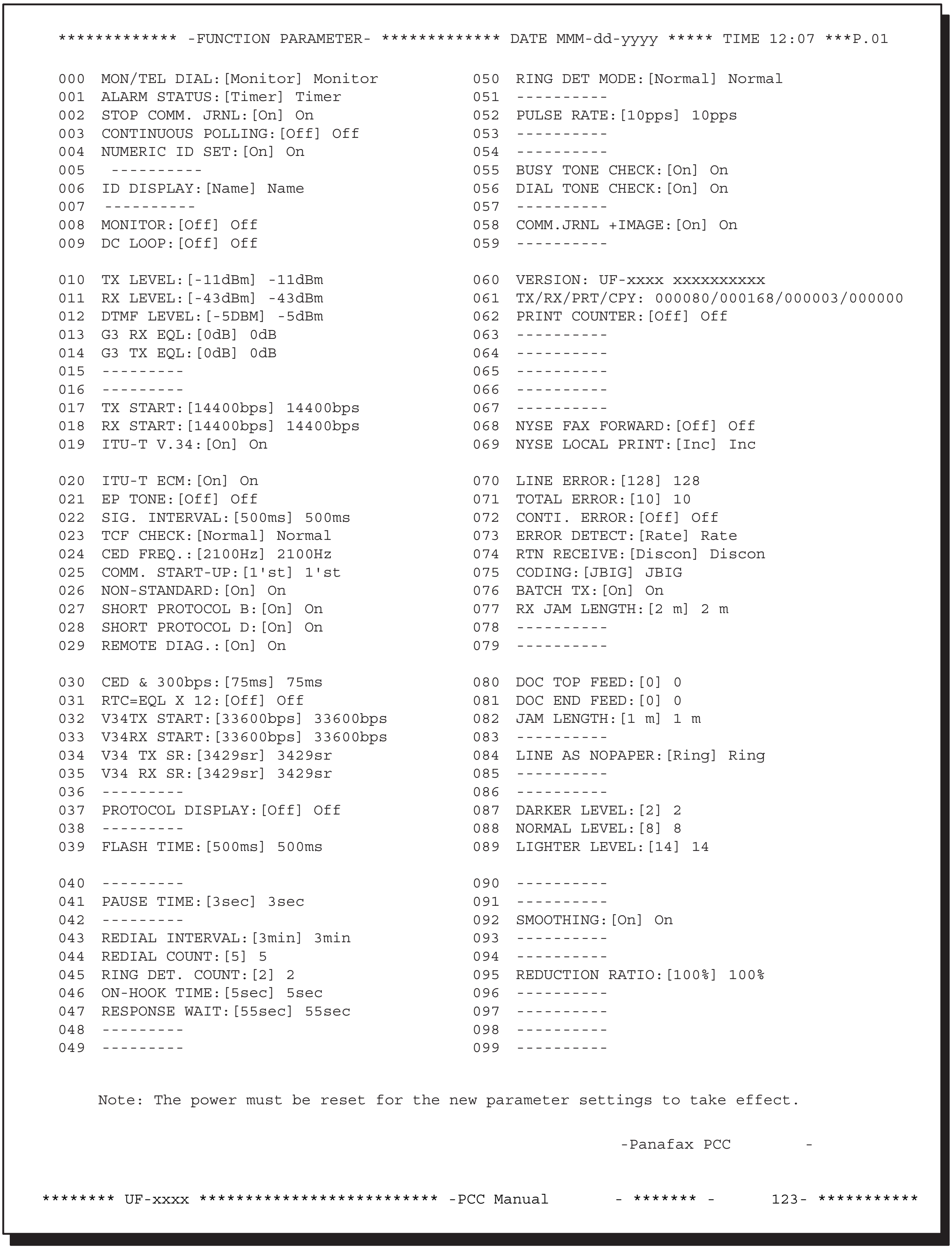
From this Service Mode you can print the Function Parameter List, Page Memory Test, Printer Report, All Document File, Protocol Trace and the Toner Order Form.

5.2.4.1. Function Parameter List

A list of all Function Parameters can be printed by the following procedure.

Press the “▼”, “▲” keys to select **“3: Print Report/List”**.
↓
Press the **“Set”** key.
↓
Select **“1: Function Parameter List”**.
↓
Press the **“Set”** key.
↓
Press the **“Stop”** key to exit the service mode.

Function Parameter List (Sample)



```
************* -FUNCTION PARAMETER- ************* DATE MMM-dd-yyyy ***** TIME 12:07 ***P.01

000  MON/TEL DIAL:[Monitor] Monitor          050  RING DET MODE:[Normal] Normal
001  ALARM STATUS:[Timer] Timer              051  ----------
002  STOP COMM. JRNL:[On] On                 052  PULSE RATE:[10pps] 10pps
003  CONTINUOUS POLLING:[Off] Off            053  ----------
004  NUMERIC ID SET:[On] On                  054  ----------
005   ----------                             055  BUSY TONE CHECK:[On] On
006  ID DISPLAY:[Name] Name                  056  DIAL TONE CHECK:[On] On
007  ----------                              057  ----------
008  MONITOR:[Off] Off                       058  COMM.JRNL +IMAGE:[On] On
009  DC LOOP:[Off] Off                       059  ----------

010  TX LEVEL:[-11dBm] -11dBm                060  VERSION: UF-xxxx xxxxxxxxxx
011  RX LEVEL:[-43dBm] -43dBm                061  TX/RX/PRT/CPY: 000080/000168/000003/000000
012  DTMF LEVEL:[-5DBM] -5dBm                062  PRINT COUNTER:[Off] Off
013  G3 RX EQL:[0dB] 0dB                     063  ----------
014  G3 TX EQL:[0dB] 0dB                     064  ----------
015  ---------                               065  ----------
016  ---------                               066  ----------
017  TX START:[14400bps] 14400bps            067  ----------
018  RX START:[14400bps] 14400bps            068  NYSE FAX FORWARD:[Off] Off
019  ITU-T V.34:[On] On                      069  NYSE LOCAL PRINT:[Inc] Inc

020  ITU-T ECM:[On] On                       070  LINE ERROR:[128] 128
021  EP TONE:[Off] Off                       071  TOTAL ERROR:[10] 10
022  SIG. INTERVAL:[500ms] 500ms             072  CONTI. ERROR:[Off] Off
023  TCF CHECK:[Normal] Normal               073  ERROR DETECT:[Rate] Rate
024  CED FREQ.:[2100Hz] 2100Hz               074  RTN RECEIVE:[Discon] Discon
025  COMM. START-UP:[1'st] 1'st              075  CODING:[JBIG] JBIG
026  NON-STANDARD:[On] On                    076  BATCH TX:[On] On
027  SHORT PROTOCOL B:[On] On                077  RX JAM LENGTH:[2 m] 2 m
028  SHORT PROTOCOL D:[On] On                078  ----------
029  REMOTE DIAG.:[On] On                    079  ----------

030  CED & 300bps:[75ms] 75ms                080  DOC TOP FEED:[0] 0
031  RTC=EQL X 12:[Off] Off                  081  DOC END FEED:[0] 0
032  V34TX START:[33600bps] 33600bps         082  JAM LENGTH:[1 m] 1 m
033  V34RX START:[33600bps] 33600bps         083  ----------
034  V34 TX SR:[3429sr] 3429sr               084  LINE AS NOPAPER:[Ring] Ring
035  V34 RX SR:[3429sr] 3429sr               085  ----------
036  ---------                               086  ----------
037  PROTOCOL DISPLAY:[Off] Off              087  DARKER LEVEL:[2] 2
038  ---------                               088  NORMAL LEVEL:[8] 8
039  FLASH TIME:[500ms] 500ms                089  LIGHTER LEVEL:[14] 14

040  ---------                               090  ----------
041  PAUSE TIME:[3sec] 3sec                  091  ----------
042  ---------                               092  SMOOTHING:[On] On
043  REDIAL INTERVAL:[3min] 3min             093  ----------
044  REDIAL COUNT:[5] 5                      094  ----------
045  RING DET. COUNT:[2] 2                   095  REDUCTION RATIO:[100%] 100%
046  ON-HOOK TIME:[5sec] 5sec                096  ----------
047  RESPONSE WAIT:[55sec] 55sec             097  ----------
048  ---------                               098  ----------
049  ---------                               099  ----------


    Note: The power must be reset for the new parameter settings to take effect.

                                                   -Panafax PCC          -

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```

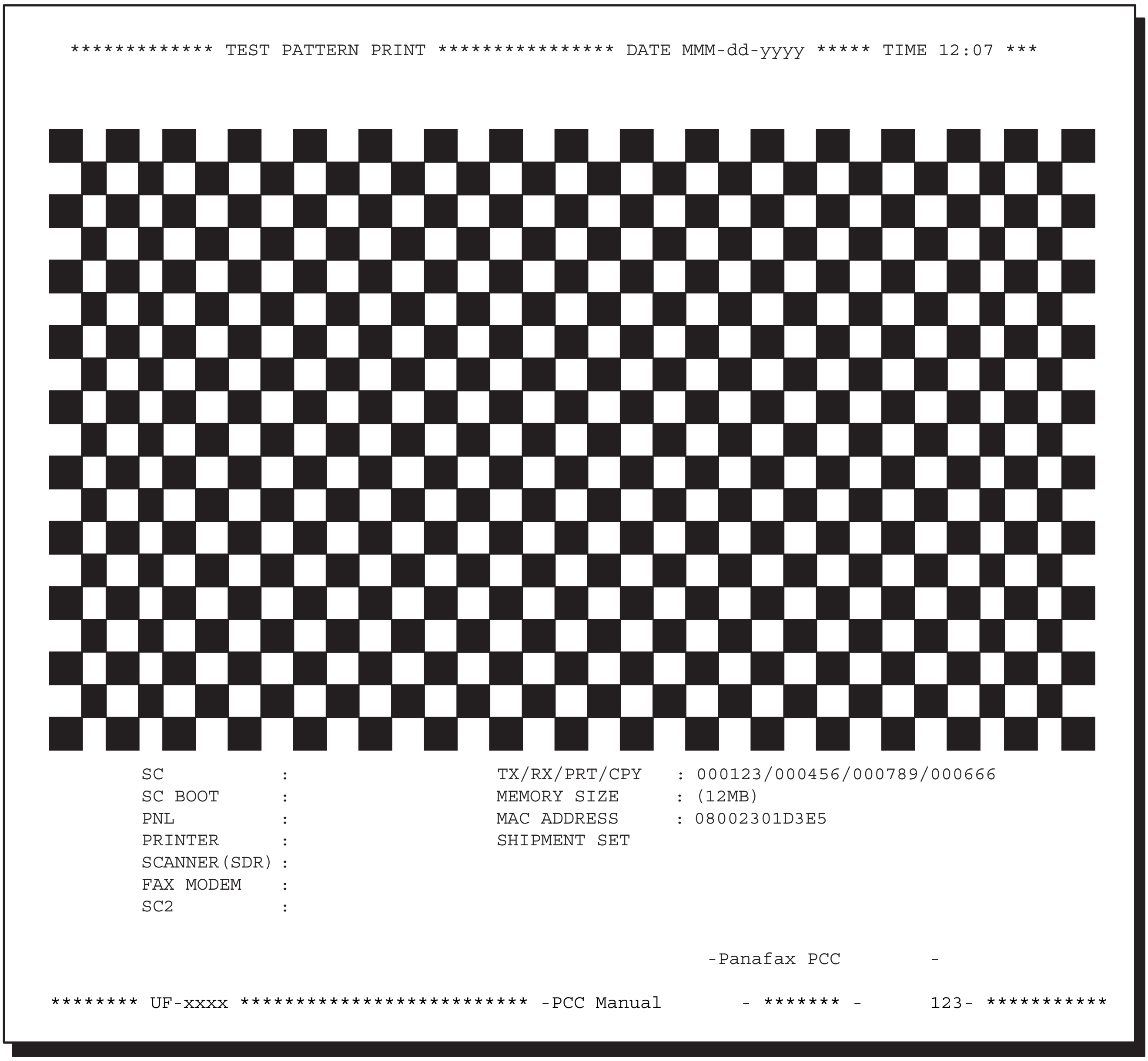
Note:

1. The contents of the Function Parameter List may vary depending on the country’s regulations.
2. “ * ” mark will be shown on the left side of number when setting was changed from default.

5.2.4.2. Page Memory Test

A test pattern prints out for checking the page memory and printer mechanism using the following procedure.

Press the "▼", "▲" keys to select **"3: Print Report/List"**.
↓
Press the **"Set"** key.
↓
Press the "▼", "▲" keys to select **"3: Page Memory Test"**.
↓
Press the **"Set"** key.
↓
Press the **"Stop"** key to exit the service mode.



```
************* TEST PATTERN PRINT **************** DATE MMM-dd-yyyy ***** TIME 12:07 ***

        SC            :                TX/RX/PRT/CPY   : 000123/000456/000789/000666
        SC BOOT       :                MEMORY SIZE     : (12MB)
        PNL           :                MAC ADDRESS     : 08002301D3E5
        PRINTER       :                SHIPMENT SET
        SCANNER(SDR)  :
        FAX MODEM     :
        SC2           :

                                                            -Panafax PCC        -

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```
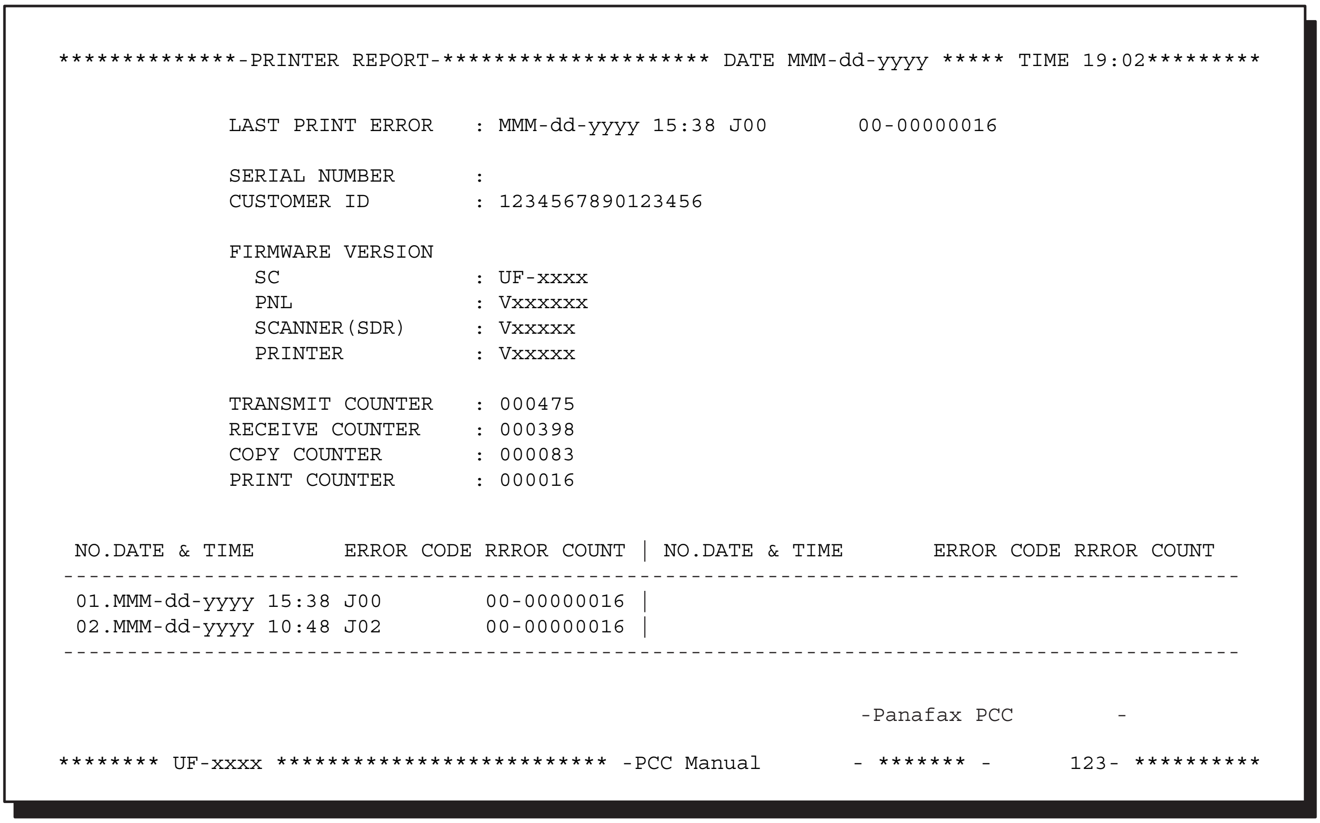

5.2.4.3. Printer Report

All printer errors are logged on the Printer Report which can be printed by the following procedure.

Press the "▼", "▲" keys to select **"3: Print Report/List"**.
↓
Press the **"Set"** key.
↓
Press the "▼", "▲" keys to select **"4: Printer Report"**.
↓
Press the **"Set"** key.
↓
Press the **"Stop"** key to exit the service mode.



```
**************-PRINTER REPORT-********************* DATE MMM-dd-yyyy ***** TIME 19:02*********

             LAST PRINT ERROR    : MMM-dd-yyyy 15:38 J00       00-00000016

             SERIAL NUMBER       :
             CUSTOMER ID         : 1234567890123456

             FIRMWARE VERSION
               SC                : UF-xxxx
               PNL               : Vxxxxxx
               SCANNER(SDR)      : Vxxxxx
               PRINTER           : Vxxxxx

             TRANSMIT COUNTER    : 000475
             RECEIVE COUNTER     : 000398
             COPY COUNTER        : 000083
             PRINT COUNTER       : 000016


 NO.DATE & TIME       ERROR CODE RRROR COUNT | NO.DATE & TIME       ERROR CODE RRROR COUNT
---------------------------------------------------------------------------------------------
 01.MMM-dd-yyyy 15:38 J00        00-00000016 |
 02.MMM-dd-yyyy 10:48 J02        00-00000016 |
---------------------------------------------------------------------------------------------


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```

5.2.4.4. All Document Files

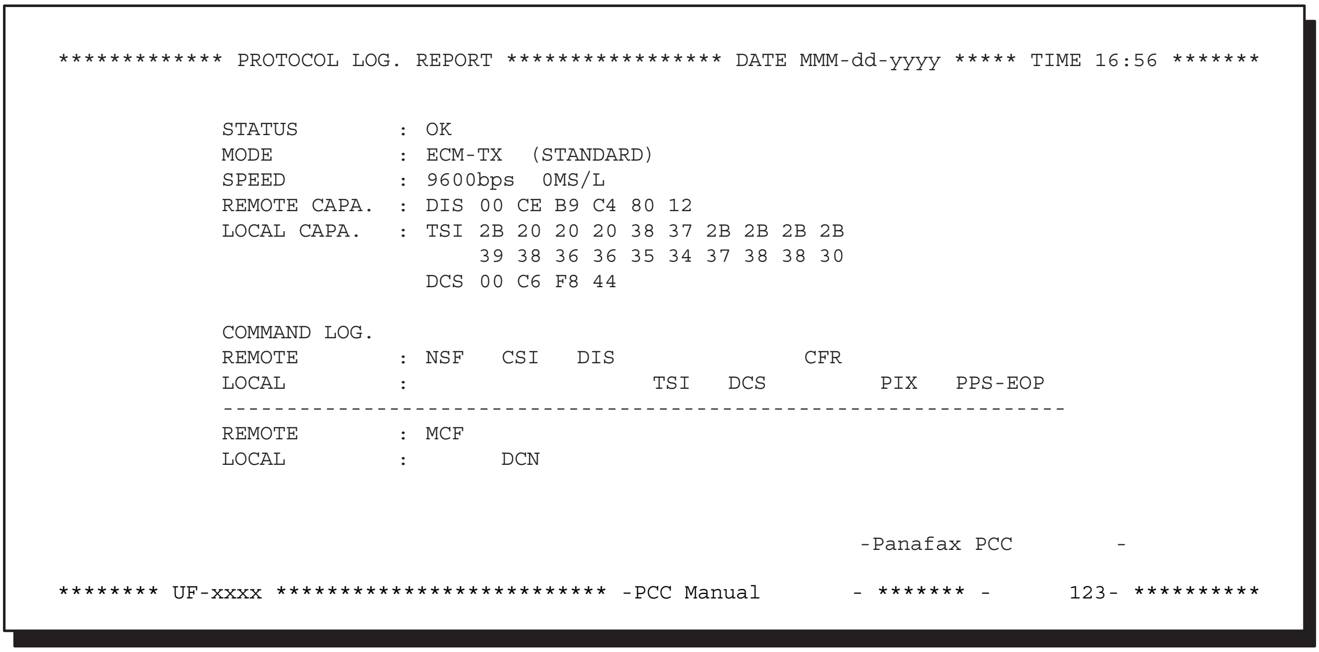
Print the document files from the Flash Memory.

Press the “▼”, “▲” keys to select **“3: Print Report/List”**.
↓
Press the **“Set”** key.
↓
Press the “▼”, “▲” keys to select **“5: All Document Files”**.
↓
Press the **“Set”** key.
↓
Press the **“Stop”** key to exit the service mode.

5.2.4.5. Protocol Trace

Print a Protocol Trace Report for the previous communication.

Press the “▼”, “▲” keys to select **“3: Print Report/List”**.
↓
Press the **“Set”** key.
↓
Press the “▼”, “▲” keys to select **“6: Protocol Trace”**.
↓
Press the **“Set”** key.
↓
Press the “▼”, “▲” keys to select **“1: L-1”**.
↓
Press the **“Set”** key.
↓
Press the **“Stop”** key to exit the service mode.



```
************* PROTOCOL LOG. REPORT ***************** DATE MMM-dd-yyyy ***** TIME 16:56 *******

             STATUS        : OK
             MODE          : ECM-TX  (STANDARD)
             SPEED         : 9600bps  0MS/L
             REMOTE CAPA.  : DIS 00 CE B9 C4 80 12
             LOCAL CAPA.   : TSI 2B 20 20 20 38 37 2B 2B 2B 2B
                                 39 38 36 36 35 34 37 38 38 30
                             DCS 00 C6 F8 44

             COMMAND LOG.
             REMOTE        : NSF   CSI   DIS               CFR
             LOCAL         :                   TSI   DCS         PIX   PPS-EOP
             ------------------------------------------------------------------
             REMOTE        : MCF
             LOCAL         :       DCN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```
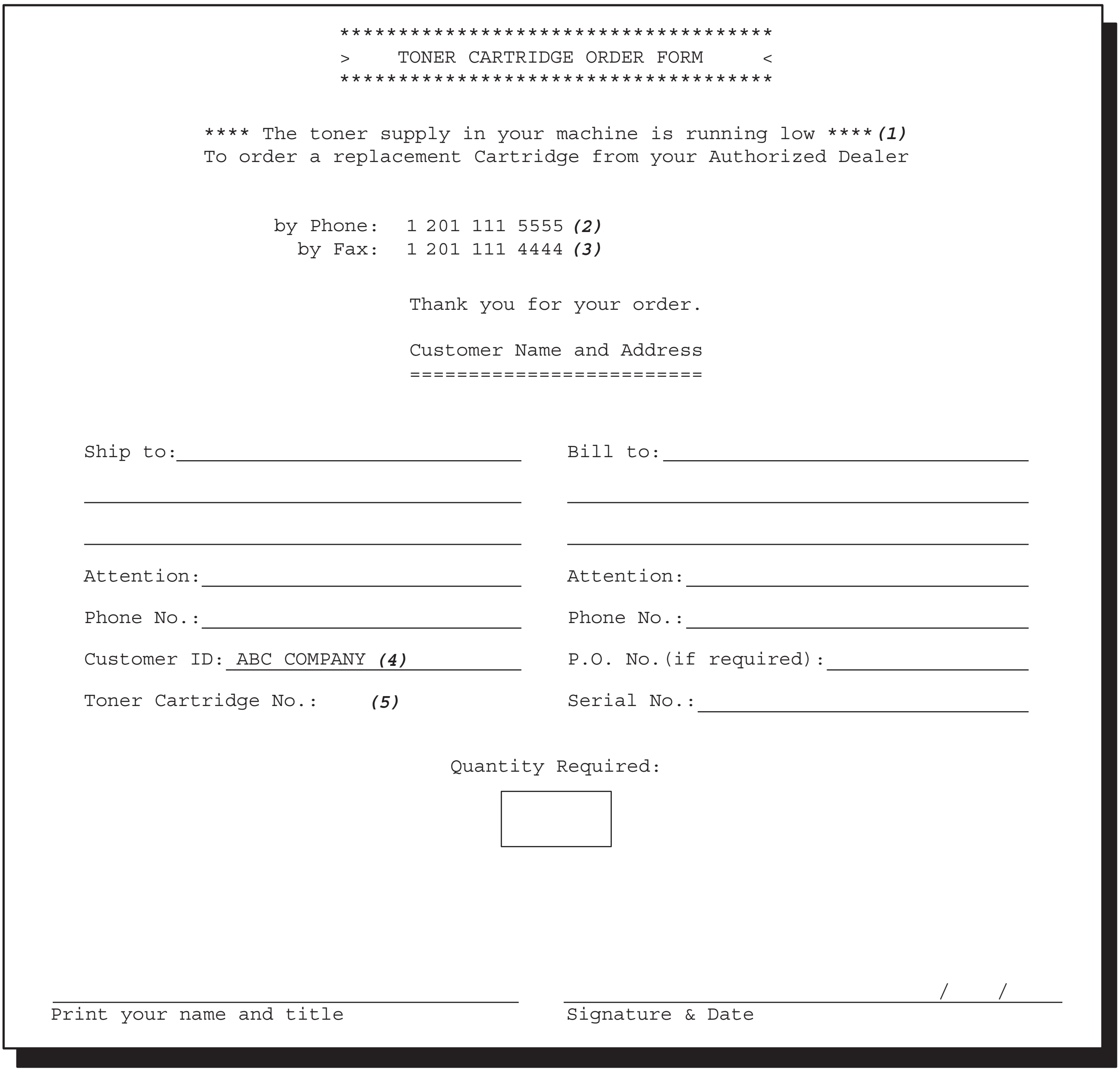

5.2.4.6. Toner Order Form

The Toner Order Form can be printed out manually by the following procedure.

Press the “▼”, “▲” keys to select **“3: Print Report/List”**.
↓
Press the **“Set”** key.
↓
Press the “▼”, “▲” keys to select **“7: Toner Order Form”**.
↓
Press the **“Set”** key.
↓
Press the **“Stop”** key to exit the service mode.



```
*************************************
>    TONER CARTRIDGE ORDER FORM     <
*************************************

**** The toner supply in your machine is running low ****(1)
To order a replacement Cartridge from your Authorized Dealer

        by Phone:   1 201 111 5555 (2)
          by Fax:   1 201 111 4444 (3)

                    Thank you for your order.

                    Customer Name and Address
                    =========================

Ship to:                              Bill to:



Attention:                            Attention:

Phone No.:                            Phone No.:

Customer ID: ABC COMPANY (4)          P.O. No.(if required):

Toner Cartridge No.:    (5)           Serial No.:

                    Quantity Required:



                                                               /    /
Print your name and title             Signature & Date
```

Explanation of Contents

(1) Low Toner Message (Fixed)	“The toner supply in your machine is running low”
(2) Toner Order Tel #	Up to 36 digits
(3) Toner Order Fax #	Up to 36 digits
(4) Customer ID	Up to 16 characters (User Identification Code)
(5) Toner Cartridge No.	Refer to the Supply list

5.2.5. Fax Service Mode 4 (Modem Test)

5.2.5.1. Binary Signal

This Service Mode is used to check the binary signal output. Signals can be output to the line using the following procedure.

Press the "▼", "▲" keys to select **"4: MODEM Test"**.
↓
Press the **"Set"** key.
↓
Press the "▼", "▲" keys select **"1: LINE-1"**. (When the optional 2nd G3 is installed)
↓
Press the **"Set"** key.
↓
Select **"1: Signal Test"**.
↓
Press the **"Set"** key.
↓
Press the desired number.
↓
Press the **"Set"** key.
↓
Press the **"Stop"** key twice to exit the service mode.

Binary Signal Table

Number	Signals
1	V21 300bps
2	V27ter 2400bps
3	V27ter 4800bps
4	V29 7200bps
5	V29 9600bps
6	V17 TC7200bps
7	V17 TC9600bps
8	V17 12000bps
9	V17 14400bps

5.2.5.2. Tonal Signal

This Service Mode is used to check the tonal signal output. Signals can be output to the line using the following procedure.

Press the “▼”, “▲” keys to select **“4: MODEM Test”**.
↓
Press the **“Set”** key.
↓
Press the “▼”, “▲” keys to select the **“2: Tonal Test”**.
↓
Press the **“Set”** key.
↓
Press the desired number and press the **“Start”** key.
↓
Press the **“Stop”** key twice to exit the service mode.

Tonal Signal Table

Number	Signals
1	462 Hz
2	1080 Hz
3	1100 Hz
4	1300 Hz
5	1650 Hz
6	1850 Hz
7	2100 Hz

5.2.5.3. DTMF Signal

This Service Mode is used to check the DTMF (Dual Tone Multi Frequency) signal output.
The DTMF signal can be generated using the following procedure.

- **DTMF Single Tone**

Press the “▼”, “▲” keys to select **“4: MODEM Test”**.
↓
Press the **“Set”** key.
↓
Press the “▼”, “▲” keys to select the **“3: DTMF Test”**.
↓
Press the **“Set”** key.
↓
Press the “▼”, “▲” keys to select **“1. Single”**.
↓
Press the desired number and press the **“Start”** key.
↓
Press the **“Stop”** key twice to exit the service mode.

- **DTMF Dual Tone**

Press the “▼”, “▲” keys to select **“4: MODEM Test”**.
↓
Press the **“Set”** key.
↓
Press the “▼”, “▲” keys to select the **“3: DTMF Test”**.
↓
Press the **“Set”** key.
↓
Press the “▼”, “▲” keys to select the **“2. Dual”**.
↓
Press the desired number and press the **“Start”** key.
↓
Press the **“Stop”** key twice to exit the service mode.

DTMF Single Tone Table

Number	DTMF Signal Tones
1	697 Hz
2	770 Hz
3	852 Hz
4	941 Hz
5	1209 Hz
6	1336 Hz
7	1477 Hz
8	1633 Hz

DTMF Dual Tone Table

Number	DTMF Dual Tones
0	941 Hz + 1336 Hz
1	697 Hz + 1209 Hz
2	697 Hz + 1336 Hz
3	697 Hz + 1477 Hz
4	770 Hz + 1209 Hz
5	770 Hz + 1336 Hz
6	770 Hz + 1477 Hz
7	852 Hz + 1209 Hz
8	852 Hz + 1336 Hz
9	852 Hz + 1477 Hz
*	941 Hz + 1209 Hz
#	941 Hz + 1477 Hz

5.2.5.4. Binary Signal (V.34)

This Service Mode is used to check the binary signal output. Signals can be output to the line using the following procedure. (V.34)

Press the “▼”, “▲” keys to select **“4: MODEM Test”**.
↓
Press the **“Set”** key.
↓
Press the “▼”, “▲” keys to select the **“4: V34 MODEM TEST”**.
↓
Press the **“Set”** key.
↓
Press the desired number and press the **“Start”** key.
↓
Press the **“Stop”** key twice to exit the service mode.

Binary Signal Table

Number	Signals	Number	Signals	Number	Signals
01	V34 2400 sr 2400 bps	22	V34 3000 sr 9600 bps	43	V34 3429 sr 4800 bps
02	V34 2400 sr 4800 bps	23	V34 3000 sr 12000 bps	44	V34 3429 sr 7200 bps
03	V34 2400 sr 7200 bps	24	V34 3000 sr 14400 bps	45	V34 3429 sr 9600 bps
04	V34 2400 sr 9600 bps	25	V34 3000 sr 16800 bps	46	V34 3429 sr 12000 bps
05	V34 2400 sr 12000 bps	26	V34 3000 sr 19200 bps	47	V34 3000 sr 19200 bps
06	V34 2400 sr 14400 bps	27	V34 3000 sr 21600 bps	48	V34 3429 sr 16800 bps
07	V34 2400 sr 16800 bps	28	V34 3000 sr 24000 bps	49	V34 3429 sr 19200 bps
08	V34 2400 sr 19200 bps	29	V34 3000 sr 26400 bps	50	V34 3429 sr 21600 bps
09	V34 2400 sr 21600 bps	30	V34 3000 sr 28800 bps	51	V34 3429 sr 24000 bps
10	V34 2800 sr 4800 bps	31	V34 3200 sr 4800 bps	52	V34 3429 sr 26400 bps
11	V34 2800 sr 7200 bps	32	V34 3200 sr 7200 bps	53	V34 3429 sr 28800 bps
12	V34 2800 sr 9600 bps	33	V34 3200 sr 9600 bps	54	V34 3429 sr 31200 bps
13	V34 2800 sr 12000 bps	34	V34 3200 sr 12000 bps	55	V34 3429 sr 33600 bps
14	V34 2800 sr 14400 bps	35	V34 3200 sr 14400 bps	56	ANSam
15	V34 2800 sr 16800 bps	36	V34 3200 sr 16800 bps	57	CM
16	V34 2800 sr 19200 bps	37	V34 3200 sr 19200 bps	58	JM
17	V34 2800 sr 21600 bps	38	V34 3200 sr 21600 bps	59	INFO0c & TONEB
18	V34 2800 sr 24000 bps	39	V34 3200 sr 24000 bps	60	INFO0c & TONEA
19	V34 2800 sr 26400 bps	40	V34 3200 sr 26400 bps	61	PPh & AC & ALT
20	V34 3000 sr 4800 bps	41	V34 3200 sr 28800 bps		
21	V34 3000 sr 7200 bps	42	V34 3200 sr 31200 bps		

5.2.6. Fax Service Mode 6 (RAM Initialization)

Initializes RAM and restores the Function Parameters to their default values.

Note:

This operation should be performed when the unit is first installed.

Press the “▼”, “▲” keys to select **“6: RAM initialize”**.

↓

Press the **“Set”** key to select the desired Mode number.

↓

Press the **“Set”** key to initialize RAM.

↓

Press the **“Stop”** key twice to exit the service mode.

RAM Initialization Table

No.	Initialize Mode	Description
01	PARAMETER INITIALIZE	Restores the Fax and Function Parameters to default values. **Note:** Turn the Power Switch to the **OFF** and back to the **ON** position to enable the parameter settings.
02	JOURNAL CLEAR	Clears the Journal contents.
03	AUTO DIAL CLEAR	Clears the One-touch, ABBR Numbers and Phone Books.
04	PROGRAM DIAL CLEAR	Clears the Program keys.
05	LOGO/ID/PSWD CLEAR	Clears the Logo, ID, Polling Password.
06	LBP ERROR LOG CLEAR	Clears the Printer Error Log.
07	SHIPMENT SET	Deletes all setting information, except parameter number 80 and 81, then set default values.
08	FLASH MEMORY CLEAR	Deletes all information in the Flash Memory.
09	ALL JOB CLEAR	Clears all Jobs stored in Flash Memory.

5.2.7. FAX Service Mode 8 (Check & Call)

5.2.7.1. Overview

This feature enables the Authorized Servicing Dealers to manage and improve the machine maintenance to their customers by alerting them of equipment problems. It also can be used as a Supply Sales Tool by alerting the Dealer that the unit is running Low on Toner. The function overview is as follows:

1. The machine's printer error information is stored in the Printer Report.
2. The printer report can be manually printed when required.
3. When printer errors occurs, the unit can automatically transmit the Service Alert Report to the pre-registered telephone number or email address.
4. When the unit detects Low Toner or PM counter reached the maintenance timing, it can automatically transmit the Maintenance Alert Report to the pre-registered telephone number or email address.

Press the "▼", "▲" keys to select **"08 Check & Call"**.

↓

Press the **"Set"** key to select the desired code number.
(i.e. 01 Service Alert Fax #, input the telephone No. or for an email address, press the **"FAX/EMAIL"** Mode key and input the email address.)

↓

Press the **"Set"** key.

↓

Press the **"Stop"** key twice to exit the service mode.

5.2.7.2. Printer Reports

- **Conditions under which a report can be printed or transmitted**

1. Manual print
   The Printer Report can be printed by Service Mode 3. (See Sect. 5.2.4.3.)
2. Automatic transmission/printout

   a. **Service Alert Report**
   When the unit detects an Emergency Printer Error, the unit will immediately transmit the Service Alert Report to the pre-registered telephone number or email address. However, the unit will not transmit the Service Alert Report if it finds the same error within the same date in the error log.

   b. **Maintenance Alert Report**
   When the unit detects Low Toner, the unit can automatically transmit the Maintenance Alert Report to the pre-registered telephone number or email address. Refer to the Error Code Table.

   c. **Toner Order Form**
   When the unit detects Low Toner, the unit can automatically print the Toner Order Form with the pre-registered order information.

   d. **Call Counter Report**
   When the printer counter reaches the pre-set number, the unit can automatically transmit the Call Counter Report to the pre-registered telephone number or email address.

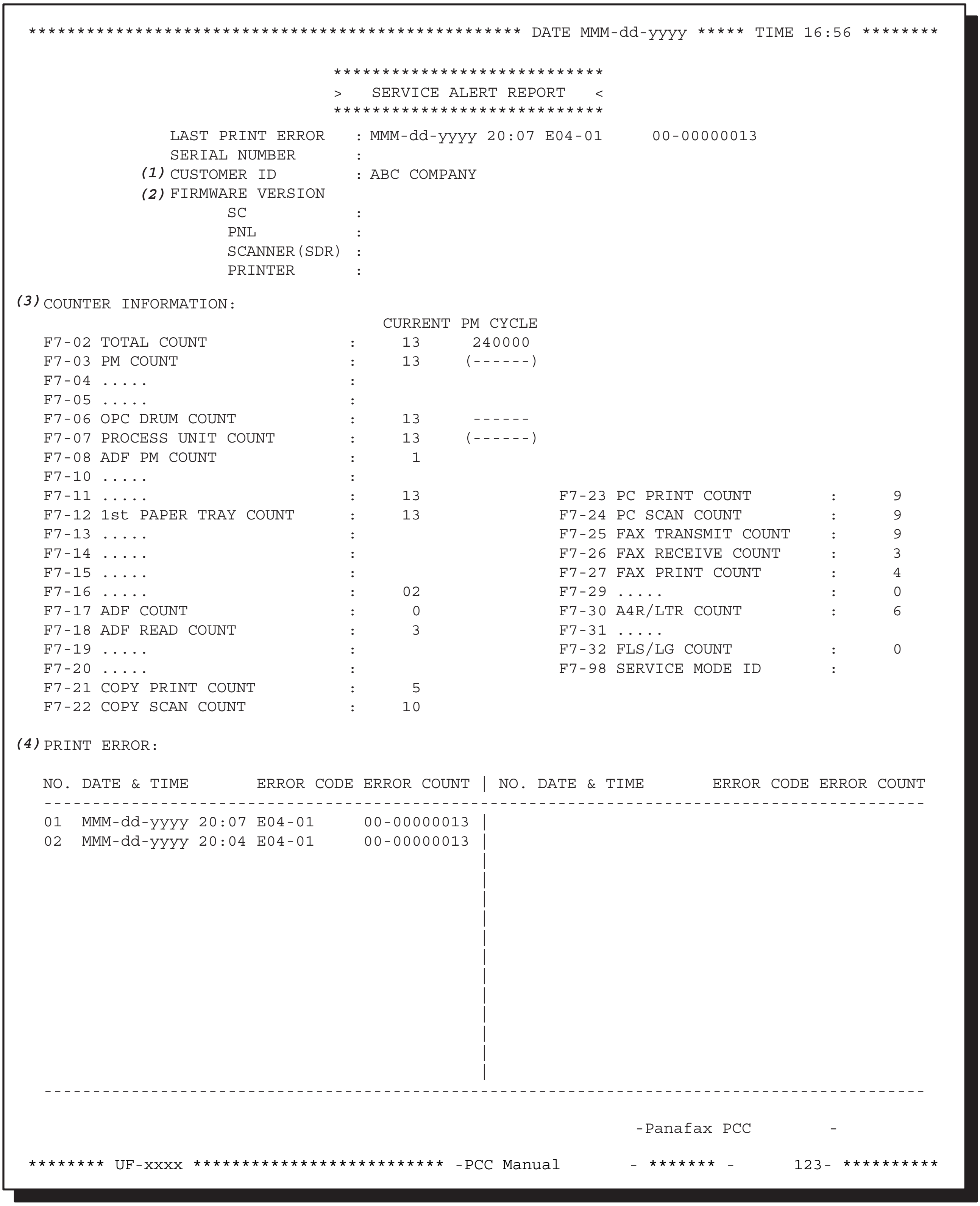
Note:
The Service and Maintenance Alert Reports are managed in the same manner as the normal memory transmission (Retry, Incomplete, File List, Display while it is transmitting, Journal).

Error Code	Error Log	Tx Report	Remarks
Ex-xx	O	S	Refer to the Mechanical Error Code (E Code) Table. (Sect. 4.7.3.)
E13	O		Out of Toner.
Jxx	O		Refer to the Jam Error Code (J Code) Table. (Sect. 4.7.2.)
Uxx			Refer to the User Error Code (U Code) Table. (Sect. 4.7.1.)
U13	O	M	Low Toner.

Note:

TX (Transmission) Report: S = Service Alert Report, M = Maintenance Alert Report

5.2.7.3. SERVICE ALERT REPORT FORMAT



```
*************************************************** DATE MMM-dd-yyyy ***** TIME 16:56 ********

                               ****************************
                               >   SERVICE ALERT REPORT   <
                               ****************************
               LAST PRINT ERROR    : MMM-dd-yyyy 20:07 E04-01     00-00000013
               SERIAL NUMBER       :
            (1)CUSTOMER ID         : ABC COMPANY
            (2)FIRMWARE VERSION
                     SC            :
                     PNL           :
                     SCANNER(SDR)  :
                     PRINTER       :

(3)COUNTER INFORMATION:
                                    CURRENT PM CYCLE
   F7-02 TOTAL COUNT             :     13     240000
   F7-03 PM COUNT                :     13    (------)
   F7-04 .....                   :
   F7-05 .....                   :
   F7-06 OPC DRUM COUNT          :     13     ------
   F7-07 PROCESS UNIT COUNT      :     13    (------)
   F7-08 ADF PM COUNT            :      1
   F7-10 .....                   :
   F7-11 .....                   :     13              F7-23 PC PRINT COUNT        :      9
   F7-12 1st PAPER TRAY COUNT    :     13              F7-24 PC SCAN COUNT         :      9
   F7-13 .....                   :                     F7-25 FAX TRANSMIT COUNT    :      9
   F7-14 .....                   :                     F7-26 FAX RECEIVE COUNT     :      3
   F7-15 .....                   :                     F7-27 FAX PRINT COUNT       :      4
   F7-16 .....                   :     02              F7-29 .....                 :      0
   F7-17 ADF COUNT               :      0              F7-30 A4R/LTR COUNT         :      6
   F7-18 ADF READ COUNT          :      3              F7-31 .....
   F7-19 .....                   :                     F7-32 FLS/LG COUNT          :      0
   F7-20 .....                   :                     F7-98 SERVICE MODE ID       :
   F7-21 COPY PRINT COUNT        :      5
   F7-22 COPY SCAN COUNT         :     10

(4)PRINT ERROR:

   NO. DATE & TIME       ERROR CODE ERROR COUNT | NO. DATE & TIME       ERROR CODE ERROR COUNT
   -------------------------------------------------------------------------------------------
   01  MMM-dd-yyyy 20:07 E04-01     00-00000013 |
   02  MMM-dd-yyyy 20:04 E04-01     00-00000013 |
                                                |
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                                                |
   -------------------------------------------------------------------------------------------

                                                                -Panafax PCC        -

 ******** UF-xxxx ************************** -PCC Manual       - ******* -      123- **********
```
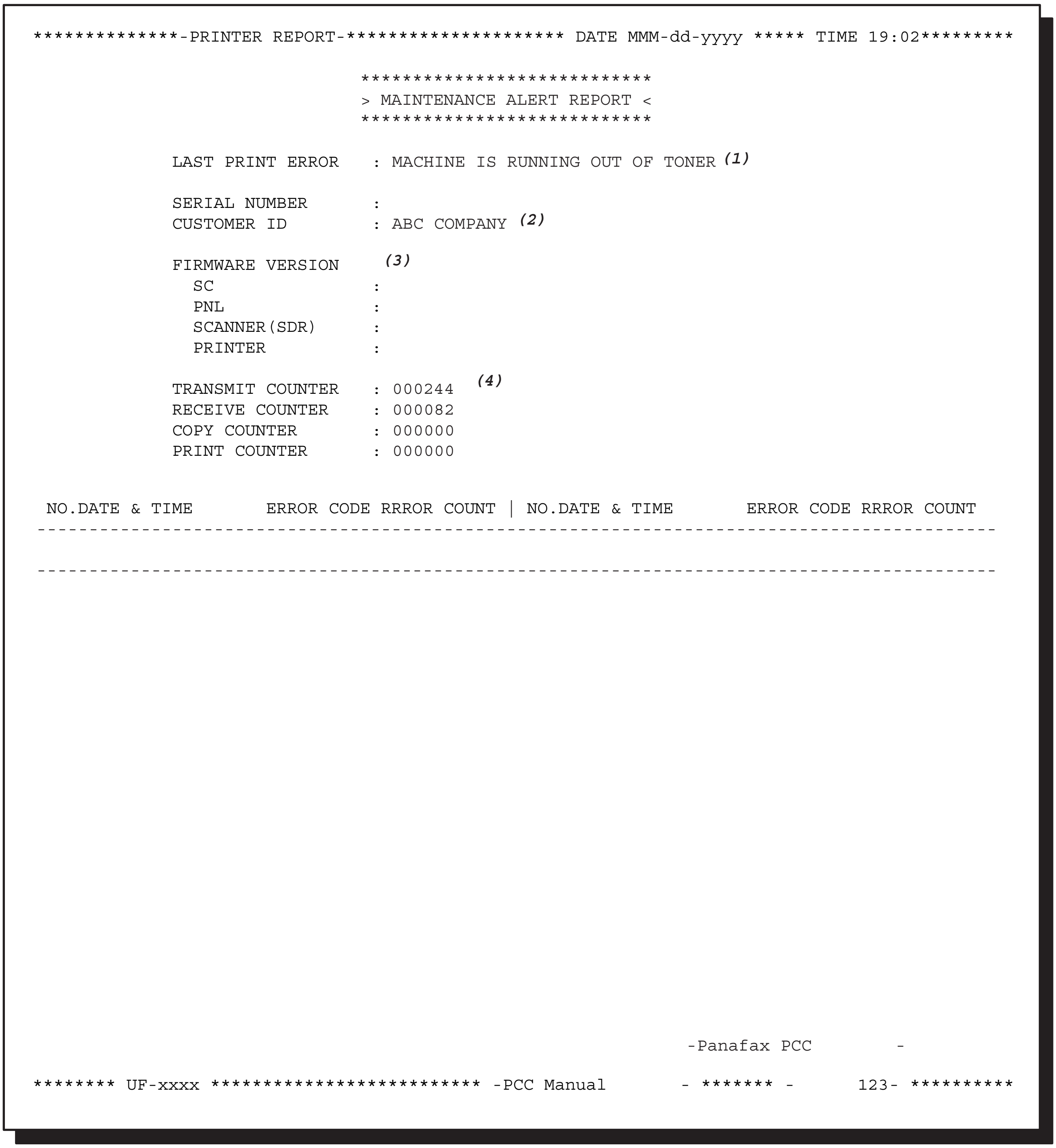

Explanation of Contents

(1) Customer ID
(2) Firmware Version
(3) Counter Information
(4) Print Error Last 30 records (Latest on top)

5.2.7.4. MAINTENANCE ALERT REPORT FORMAT

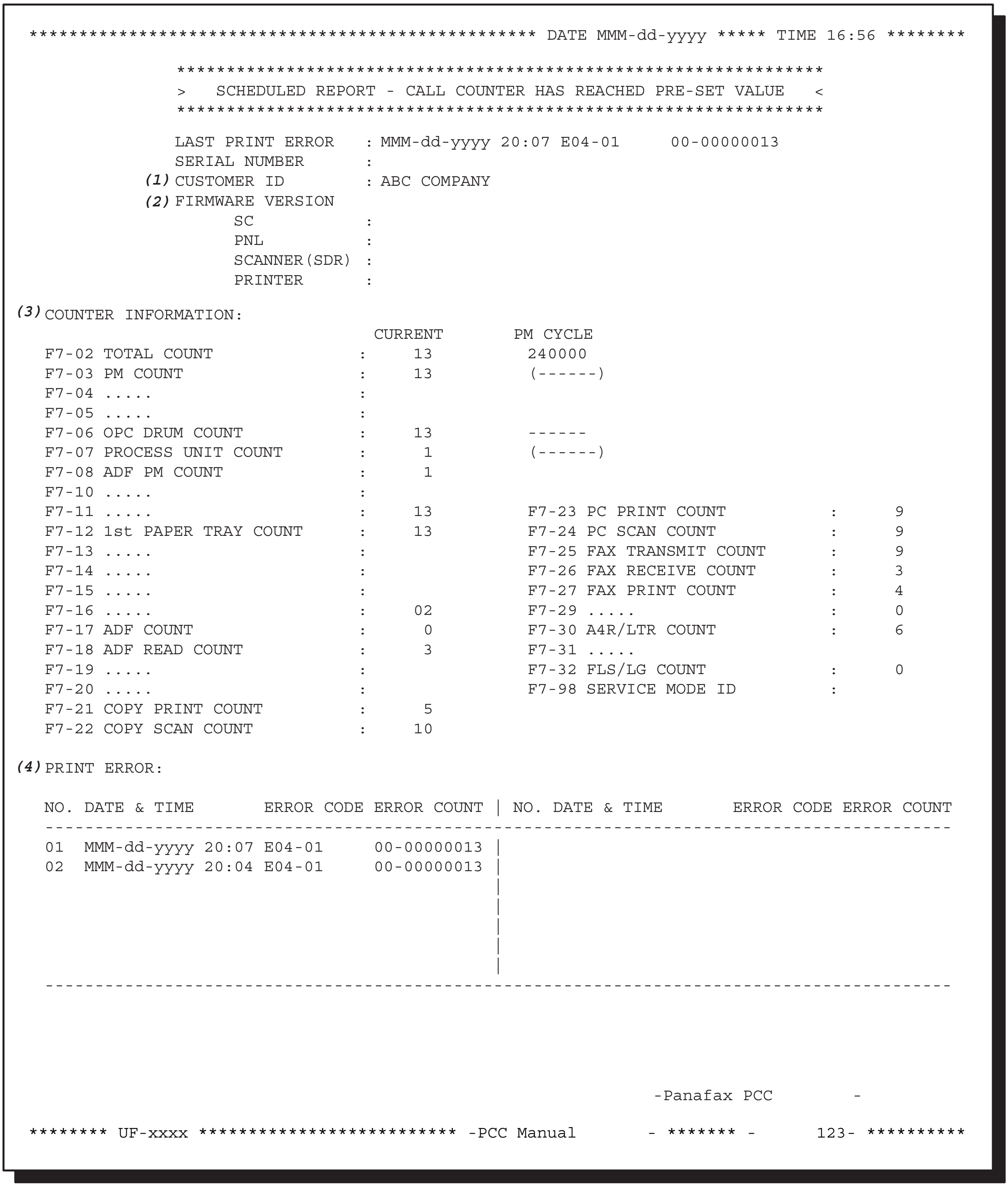


```
**************-PRINTER REPORT-********************* DATE MMM-dd-yyyy ***** TIME 19:02*********

                               ****************************
                               > MAINTENANCE ALERT REPORT <
                               ****************************

             LAST PRINT ERROR    : MACHINE IS RUNNING OUT OF TONER (1)

             SERIAL NUMBER       :
             CUSTOMER ID         : ABC COMPANY (2)

             FIRMWARE VERSION     (3)
               SC                :
               PNL               :
               SCANNER(SDR)      :
               PRINTER           :

             TRANSMIT COUNTER    : 000244  (4)
             RECEIVE COUNTER     : 000082
             COPY COUNTER        : 000000
             PRINT COUNTER       : 000000

 NO.DATE & TIME       ERROR CODE RRROR COUNT | NO.DATE & TIME       ERROR CODE RRROR COUNT
--------------------------------------------------------------------------------------------

--------------------------------------------------------------------------------------------

                                                                         -Panafax PCC        -

******** UF-xxxx ************************** -PCC Manual       - ******* -      123- **********
```

Explanation of Contents

(1) Low Toner Message (Fixed)	“MACHINE IS RUNNING OUT OF TONER”
(2) Customer ID	Up to 16 characters (User Identification Code)
(3) Firmware Version	
(4) Transmission / Reception / Copy / Print Counters	

5.2.7.5. CALL COUNTER REPORT



```
*************************************************** DATE MMM-dd-yyyy ***** TIME 16:56 ********

               *****************************************************************
               >   SCHEDULED REPORT - CALL COUNTER HAS REACHED PRE-SET VALUE   <
               *****************************************************************

               LAST PRINT ERROR   : MMM-dd-yyyy 20:07 E04-01     00-00000013
               SERIAL NUMBER      :
            (1)CUSTOMER ID        : ABC COMPANY
            (2)FIRMWARE VERSION
                     SC           :
                     PNL          :
                     SCANNER(SDR) :
                     PRINTER      :

(3)COUNTER INFORMATION:
                                   CURRENT       PM CYCLE
  F7-02 TOTAL COUNT             :     13          240000
  F7-03 PM COUNT                :     13          (------)
  F7-04 .....                   :
  F7-05 .....                   :
  F7-06 OPC DRUM COUNT          :     13          ------
  F7-07 PROCESS UNIT COUNT      :      1          (------)
  F7-08 ADF PM COUNT            :      1
  F7-10 .....                   :
  F7-11 .....                   :     13          F7-23 PC PRINT COUNT           :      9
  F7-12 1st PAPER TRAY COUNT    :     13          F7-24 PC SCAN COUNT            :      9
  F7-13 .....                   :                 F7-25 FAX TRANSMIT COUNT       :      9
  F7-14 .....                   :                 F7-26 FAX RECEIVE COUNT        :      3
  F7-15 .....                   :                 F7-27 FAX PRINT COUNT          :      4
  F7-16 .....                   :     02          F7-29 .....                    :      0
  F7-17 ADF COUNT               :      0          F7-30 A4R/LTR COUNT            :      6
  F7-18 ADF READ COUNT          :      3          F7-31 .....
  F7-19 .....                   :                 F7-32 FLS/LG COUNT             :      0
  F7-20 .....                   :                 F7-98 SERVICE MODE ID          :
  F7-21 COPY PRINT COUNT        :      5
  F7-22 COPY SCAN COUNT         :     10

(4)PRINT ERROR:

  NO. DATE & TIME       ERROR CODE ERROR COUNT | NO. DATE & TIME       ERROR CODE ERROR COUNT
  -------------------------------------------------------------------------------------------
  01  MMM-dd-yyyy 20:07 E04-01     00-00000013 |
  02  MMM-dd-yyyy 20:04 E04-01     00-00000013 |
                                               |
                                               |
                                               |
                                               |
                                               |
  -------------------------------------------------------------------------------------------




                                                                  -Panafax PCC        -

******** UF-xxxx ************************** -PCC Manual       - ******* -      123- **********
```

Explanation of Contents

(1) Customer ID
(2) Firmware Version
(3) Counter Information
(4) Call Counter Pre-Set Value

5.2.8. Service Mode 9 (System Maintenance)

5.2.8.1. Overview

This Service Mode is used to maintain the machine. Use the following procedure for System Maintenance.

Service Mode 9

Step	Operation or Unit Condition	LCD Display
1	Stand-by	`MMM-dd-yyyy  15:00` `00%`
2	Press the **“Function”** and the **“7”** keys.	`SET MODE        (1-6)` `ENTER NO. OR ∨∧`
3	Press the **“Monitor”** key four times, then press the **“*”** key.	`SERVICE MODE` `ENTER NO. OR ∨∧`
4	Press the **“9”** key.	`SYSTEM MAINT. (1-8)` `1:FIRMWARE UPDATE`
5	Press the **“Set”** and the **“Start”** keys.	`FIRMWARE BACKUP` `* IN PROGRESS *`
6	After the backup is completed, repeat step 4 through 5 to request an operation.	`SERVICE MODE` `ENTER NO. OR ∨∧`
7	Press the **“Stop”** key twice to return to stand-by.	`MMM-dd-yyyy  15:00` `00%`

Note:

If there is NO File in the machine, this operation will not function.
Press the “Stop” key twice to exit the service mode.

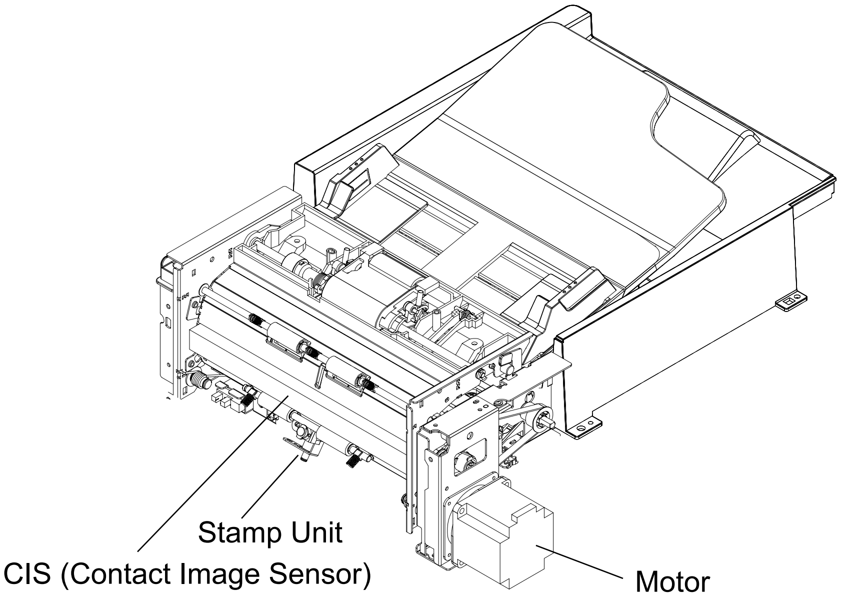
System Maintenance Table

No.	Maintenance Mode	Description
1	Firmware update	**PC --> Host** Updates the firmware in the machine with the Master Firmware from the PC. After the firmware is updated, the machine reboots automatically and returns to standby.
3	PARAMETER RESTOR	Restores the parameters from the Backup Card into the machine.
4	PARAMETER BACK UP	Creates a Backup Card of the machine’s parameters. (A 1 MB, or higher Flash Memory Card is required)
8	Send RCV'D File	Transfers documents from memory to another fax machine during a fatal printer error.

6 System Description

6.1. Transmit Mechanism

The transmit mechanism consists of components which feed, scan and eject documents, as well as send signals. These components and their functions are as follows:



6.1.1. ADF Mechanism

The ADF (Automatic Document Feeder) automatically feeds paper into the unit, and consists of ADF Roller and Separation Roller. The document is placed face up on the Document Tray before being fed into the unit.
The ADF Roller feeds individual pages into the scanning area.
The Separation Roller and ADF Pad separates documents placed on the ADF, preventing multiple feeding.

6.1.2. Transmit Guide Unit

The Transmit Guide Unit is an auxiliary part used for feeding and ejecting documents. It consists of the Transmit Guide, Control Panel Chassis, Feed Roller, Eject Roller, and Eject Pinch Roller and Feed Pinch Roller. This unit also provides the white scanning area and serves as a base for electronic white reference.

6.1.3. Transmit Mechanism Drive System

This system feeds documents through the transmitting mechanism, and consists of rollers, gears, belts and a stepper motor.
The motor, a Stepper Motor, controlled by the CPU, drives the ADF Roller, Feed Roller and Eject Roller, with the speed based on the density of the picture information.
The Feed Roller feeds the document to the scanning point and ejects the document out of the machine.

6.1.4. Verification Stamp Unit

The Verification Stamp Unit stamps the "X" mark on the face of the document after the document is successfully transmitted or stored.

6.1.5. Scanner Block

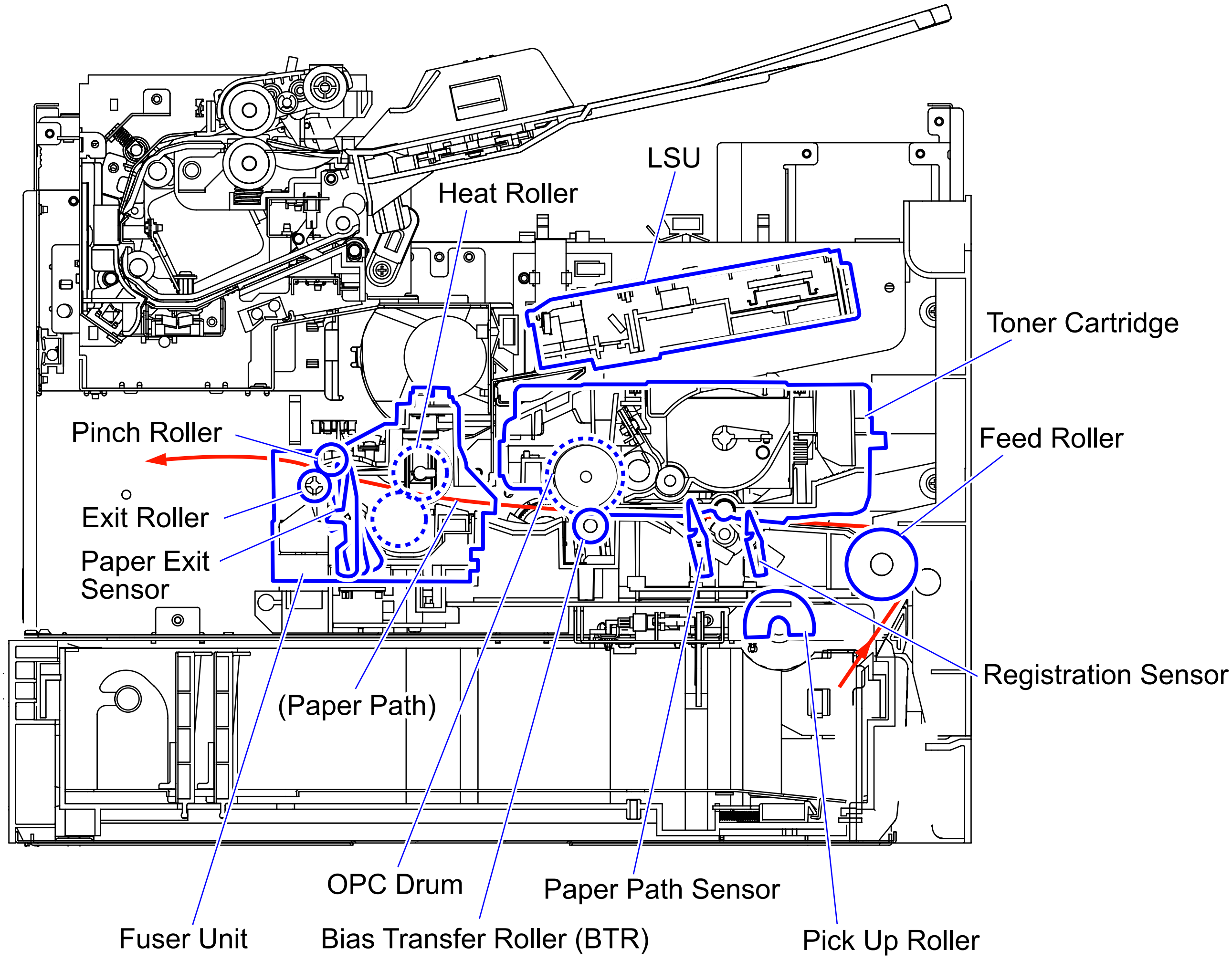
The scanner block consists of the CIS (Contact Image Sensor) Assembly.
The in-line Lens Array focus the image information and pass it to the CIS.
The CIS array converts the image information into the electronic signals.

6.2. Control Panel

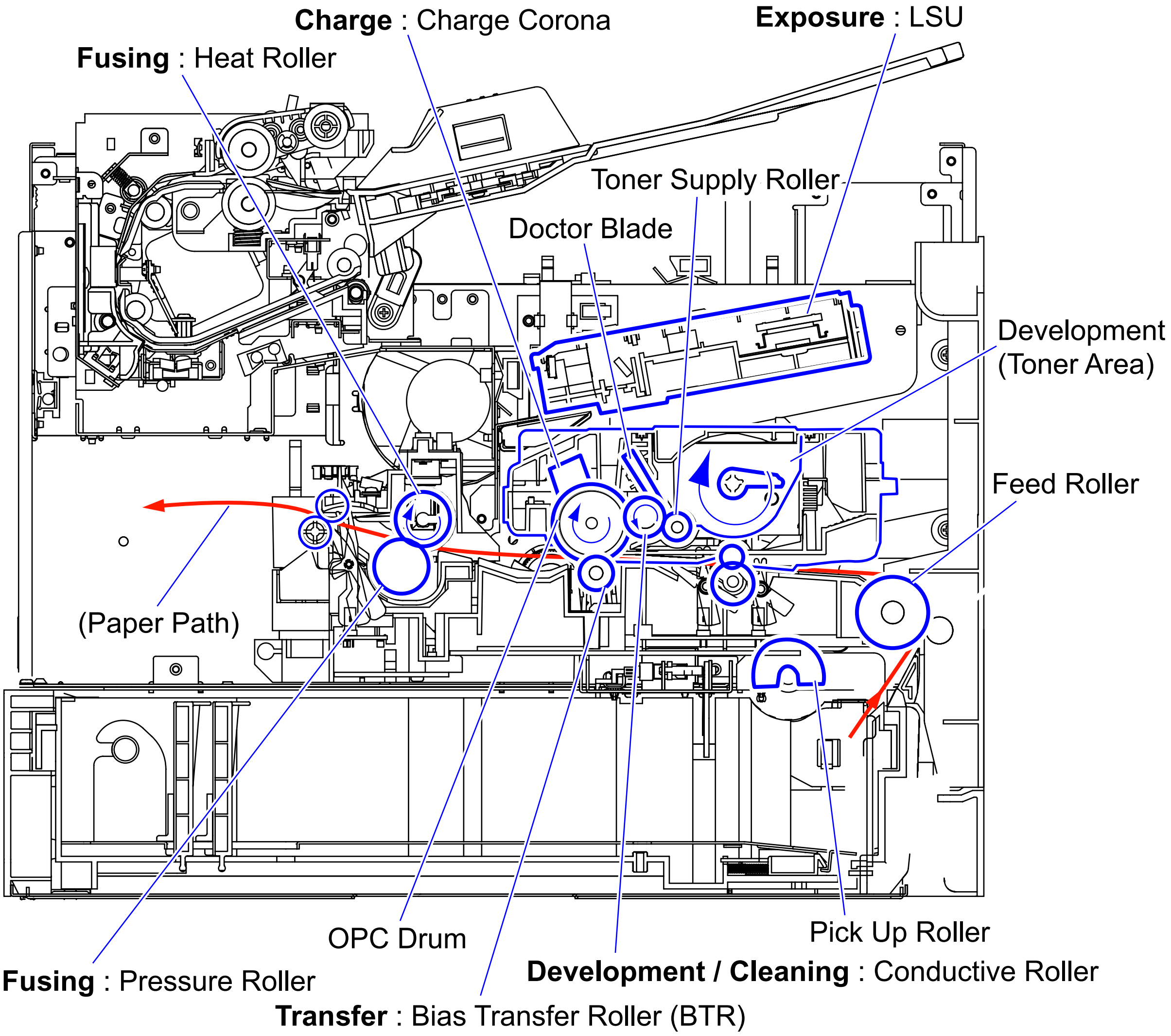
The Control Panel consists of the PNL PC Board and LCD Unit, which displays the various status messages, and a hard key-type panel, or a membrane-type panel depend on the destinations.

6.3. Printer / Receive Mechanism

6.3.1. Component Layout and Paper Path


LSU
Heat Roller
Toner Cartridge
Feed Roller
Pinch Roller
Exit Roller
Paper Exit Sensor
Registration Sensor
(Paper Path)
OPC Drum
Paper Path Sensor
Fuser Unit
Bias Transfer Roller (BTR)
Pick Up Roller

6.3.2. Print Process


Charge : Charge Corona
Exposure : LSU
Fusing : Heat Roller
Toner Supply Roller
Doctor Blade
Development
(Toner Area)
Feed Roller
(Paper Path)
OPC Drum
Pick Up Roller
Fusing : Pressure Roller
Development / Cleaning : Conductive Roller
Transfer : Bias Transfer Roller (BTR)

6.3.2.1. Charge

The Charge Corona applies a high, uniform positive charge to the surface of the Organic Photo Conductor (OPC) Drum. The charge level is approximately 900 VDC and remains because the OPC Drum has a high electrical resistance when concealed in darkness.

6.3.2.2. Exposure

The laser beam passes through the Collimator Lens, is reflected by the Polygon Mirror, and is focused onto the drum after passing through an image-forming (F-θ) Lens and a Reflection Mirror. Wherever the laser beam strikes the drum, the positive charge dissipates. A latent electrical image of two different voltages potentials, which corresponds to the original page, is formed on the OPC Drum.

6.3.2.3. Development / Cleaning

Development:

Non-magnetic Toner is supplied to the Conductive Roller by the Toner Supply Roller. The Toner on the Conductive Roller is positively charged by friction with the Toner Supply Roller, and the Doctor Blade ensures a thin layer on the surface of the Conductive Roller. Wherever the Conductive Roller touches the drum, the positively charged toner is attracted to the latent image on the drum, and the latent image is converted to a visible toner image. A bias voltage of approx. 350 VDC is applied to the Conductive Roller to achieve maximum print quality.

Cleaning:
After transfer, residual toner remains on the drum surface, and for next printing, the residual toner reaches to the development area via charge and exposure. The charge level of the OPC corresponds to the white background is +900 VDC, and the bias voltage of the Conductive Roller is approx. +350 VDC. Therefore, the positively charged residual toner on the OPC Drum is attracted and collected to the Conductive Roller. The charge level of OPC after exposure is +100 VDC. So, the printing area of the OPC is cleaned.

6.3.2.4. Transfer

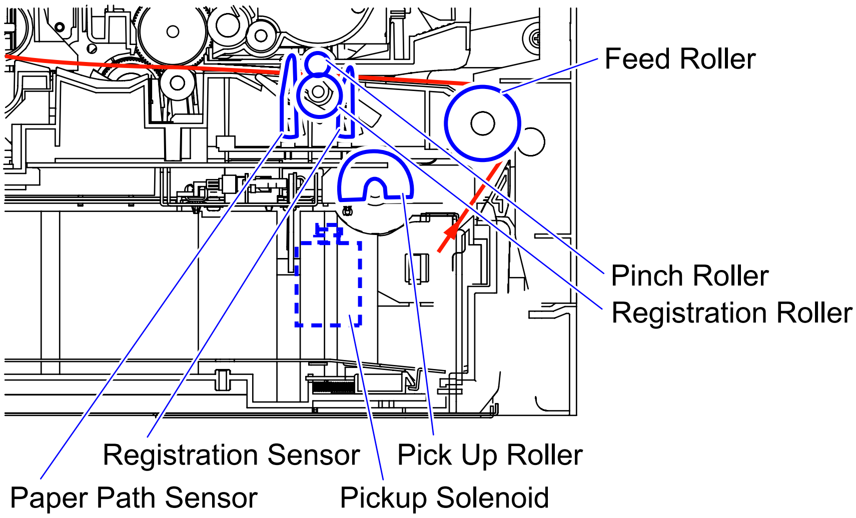
As the paper is fed between the drum and the Transfer Roller, a high negative charge is applied to the back of the paper. The positive toner particles are then attracted from the drum surface to the paper. After transfer, the paper is separated from the drum surface by the curvature of the drum.

6.3.2.5. Fusing

The paper passes through the Fuser Rollers and is subjected to heat and pressure. The fusing temperature is approximately 190 °C (374 °F), and the pressure is approximately 0.36 kg/cm (3.53 N/cm). This bonds, or fuses the toner into the paper.

6.3.3. Paper Feed

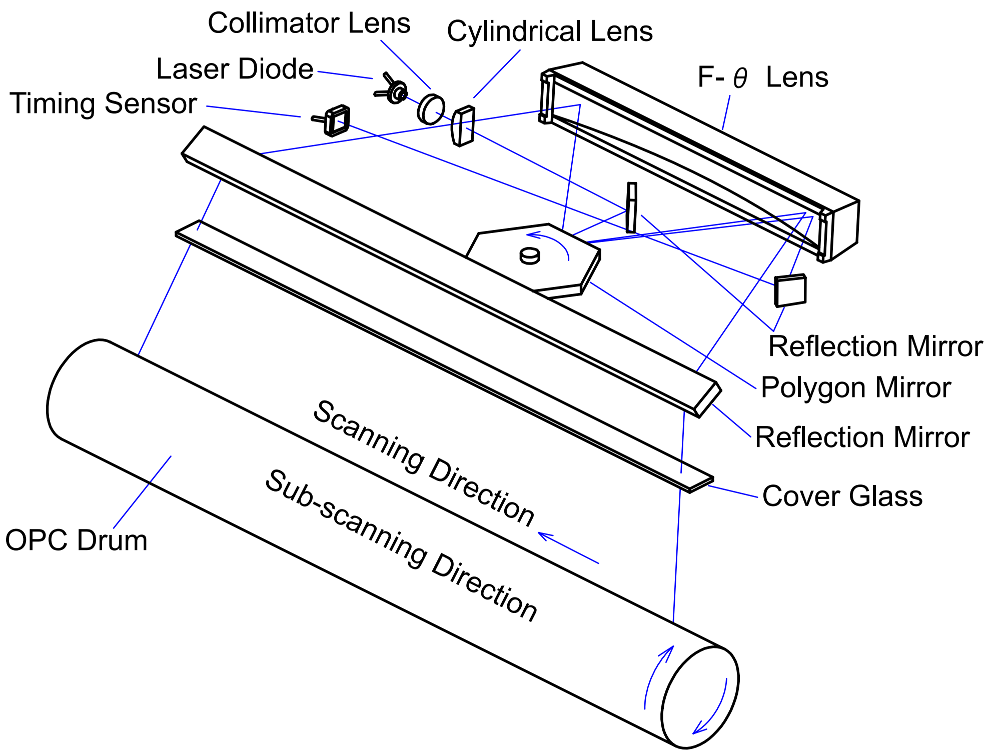
Media Tray
The main motor drives the Pick Up Roller after the Pick Up Solenoid is energized, which engages the Pick Up Roller Clutch and feeds a sheet of paper. The paper is pushed to the Paper Feed Roller, which overdrives the paper slightly causing a buckle to ensure the paper is aligned with the stationary Registration Roller.
While triggering the Registration Sensor notifying the CPU paper is ready to feed.



6.3.4. Laser Scan Unit (Exposure)

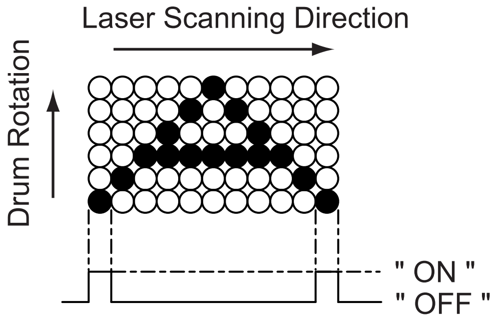
6.3.4.1. Operation Theory

The light beam from the Laser Diode (light source) is modulated by the digital signal (nVIDEO) and converted to parallel light waves by the Collimator Lens. The beam is then sent to the rotating Polygon Mirror (polygon scanner), where it is reflected through the F-θ Lens and then focused onto the OPC Drum surface. The diameter of the beam is about 80 μm, and the light moves across the surface of the OPC Drum in the scanning direction of right to left. As the drum rotates (sub-scans), a static image is formed where the laser beam touches the drum surface.
The laser beam is also deflected to the Timing Sensor. This sensor controls the start timing of scanning on the drum, providing a consistent left margin. The CPU uses the Timing Sensor to detect abnormal signals.


Collimator Lens
Cylindrical Lens
Laser Diode
Timing Sensor
F- θ Lens
Reflection Mirror
Polygon Mirror
Reflection Mirror
Cover Glass
OPC Drum
Scanning Direction
Sub-scanning Direction

6.3.4.2. Laser Beam

The laser beam is pulsed On and Off by the digital signal (nVIDEO) to form a latent image of two different voltage potentials on the drum, as shown below.


Laser Scanning Direction
Drum Rotation
" ON "
" OFF "

Turn Laser Beam ON and OFF
corresponding with the images.

● : Laser Beam-"ON" (Drum discharged)

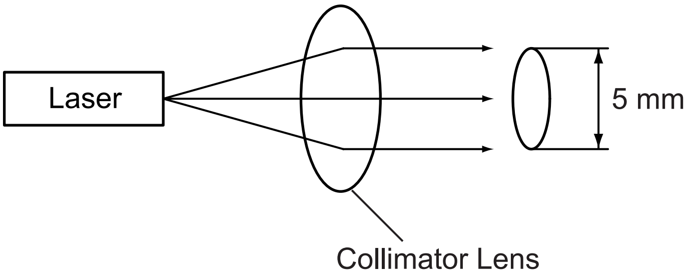
○ : Laser Beam-"OFF"

Laser Diode Specification

Item	Minimum	Standard	Maximum	
Oscillation Wavelength	770	785	800	nm
Output Light Power (OPC Drum Surface)	0.315	0.350	0.385	mW

6.3.4.3. Collimator Lens

The Collimator Lens converts light from the Laser Diode to parallel light. This aids in scanning and provides better convergence to a dot.


Laser
5 mm
Collimator Lens

6.3.4.4. Polygon Scanner

The Polygon Scanner consists of a 6-sided Mirror directly driven by a brushless DC Motor at a rate 20,078.74 rpm. The laser beam is reflected across the OPC Drum by the mirror faces and produces the scan. One mirror face is equal to one main scan. This unit features stable line scanning speed, precision mirror surface reflection angle, reflect-free surfaces, and instant start.

Polygon Scanner Specifications

Item	Specification	
Mirror	6	faces
Revolution	20,078.74	rpm

6.3.4.5. Cylindrical Lens and F-θ Lens

Each of the Polygon Mirror surfaces has a slight imperfection. This prevents the beam from scanning the OPC Drum surface at the constant interval in the sub-scan direction. The Cylindrical Lens and F-θ Lens are used for correcting this uneven laser scanning.

6.3.4.6. F-θ Lens

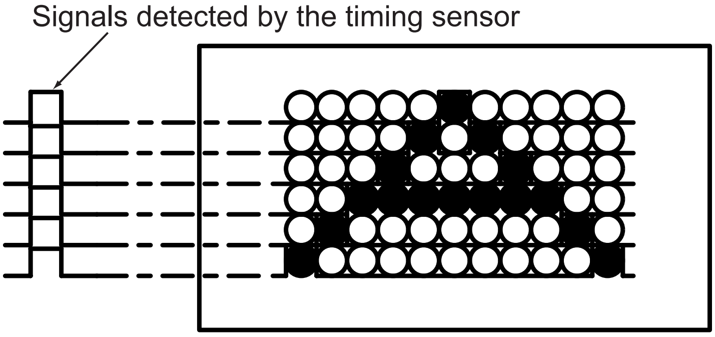
This lens ensures that the beam scans across the surface of the OPC Drum at a constant rate. The beam is refracted to parallel light as it passes through the lens to ensure that the dots at the edge of the drum and at the center of the drum are equally spaced. This lens also provides a set focal length for laser beam.

F-θ Specifications

Item	Specification	
Scanning Width	207.43	mm
Focusing Light Spot Size	80 x 90	µm

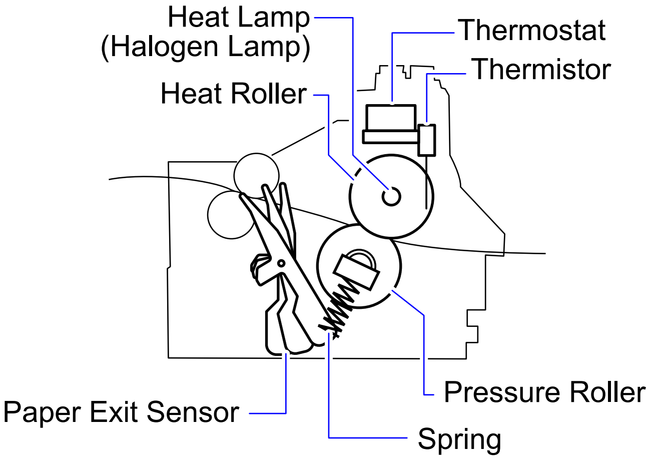
6.3.4.7. Timing Sensor

This sensor detects the laser beam and determines the start timing for scanning. A pin photodiode is used as the Timing Sensor.



6.3.5. Fuser Unit

A 600 W Heat Lamp (Halogen Lamp) heats the surface of the teflon-coated Heat Roller to approximately 190 °C (374 °F), a Thermistor monitors the Heat Roller temperature, and the CPU controls the ON/OFF timing of the lamp.


Heat Lamp
(Halogen Lamp)
Heat Roller
Thermostat
Thermistor
Pressure Roller
Paper Exit Sensor
Spring

The Thermostat is mounted 2.5 mm away from the Heat Roller. If the ambient temperature reaches 190 °C (374 °F), the Thermostat is opened, and power is removed from the Heat Lamp. The surface of the Thermostat is not as hot as that of the Heat Roller. When the Thermostat opens, the surface of the Heat Roller may reach 210 °C (410 °F), and the system displays E4-01. If the Thermistor opens, the system displays E4-01. If by chance the Thermostat malfunctions a Thermal Fuse opens.
The Pressure Roller is kept in contact with the Heat Roller through 2 pressure springs, which apply a pressure of approximately 0.36 kg/cm (3.56 N/cm). Drive is supplied from the Main Motor via Intermediate Gears.

7 Installation

Refer to the Operating Instructions (For Basic Operations).

Note:
Some models (i.e. USA/GSA models) may have the Power Switch.

Fax Parameter Table (AU) for reference

No.	Parameter	Setting Number	Setting	Comments
001	CONTRAST (HOME)	1	Lightest	Setting the home position for the CONTRAST.
		2	Lighter	
		*3	Normal	
		4	Darker	
		5	Darkest	
002	RESOLUTION (HOME)	*1	Standard	Setting the home position for the RESOLUTION.
		2	Fine	
		3	S-Fine	
		4	600dpi	
		5	Halftone (Fine)	
		6	Halftone (S-Fine)	
		7	Halftone (600dpi)	
004	STAMP (HOME)	*1	Off	Setting the home position for the STAMP. To select the stamp function when the document is stored in memory, see Fax Parameter No.28 (STAMP AT MEM. XMT).
		2	On	
005	MEMORY (HOME)	1	Off	Setting the home position for the MEMORY.
		*2	On	
006	DIALING METHOD	1	Pulse	Selecting the dialing method.
		*2	Tone	
007	HEADER PRINT	*1	Inside	Selecting the printing position of the header. **Inside:** Inside TX copy area. **Outside:** Outside TX copy area. **No print:** Header is not printed.
		2	Outside	
		3	No print	
008	HEADER FORMAT	*1	Logo, ID No.	Selecting the header format.
		2	From To	
009	RCV'D TIME PRINT	*1	Invalid	Selecting whether the machine prints the received date & time, remote ID, percentage of reduction and page number on the bottom of each received document.
		2	Valid	
010	KEY/BUZZER VOLUME	1	Off	Selecting the key touch beep sound.
		*2	Soft	
		3	Loud	

No.	Parameter	Setting Number	Setting	Comments
012	COMM. JOURNAL	1	Off	Selecting the home position of printout mode for COMM. Journal Off / Always / Inc. only. **Off:** Does not print **Always:** Always prints **Inc. Only:** Prints only when communication has failed.
		2	Always	
		*3	Inc. Only	
013	AUTO JRNL PRINT	1	Invalid	Selecting whether the machine prints the journal automatically after every 200 transactions.
		*2	Valid	
014	FILE ACCEPT REP.	*1	Invalid	Selecting whether the machine prints the file acceptance journal. If you set this parameter to “2:Valid”, a journal will be printed out after a new job is stored in the memory.
		2	Valid	
017	RECEIVE MODE	1	Manual	Setting the reception mode to automatic or manual.
		*2	Auto	
022	SUBSTITUTE RCV	1	Invalid	Selecting whether the machine receives to memory when the recording paper runs out, toner runs out or the recording paper is jammed.
		*2	Valid	
023	REC. PAPER SIZE		(----)	Selecting the Paper Tray and paper size.
024	PRINT REDUCTION	1	Fixed	Selecting print reduction mode. **Fixed:** Reduce received document according to setting of Parameter No.25. **Auto:** Reduce received document according to the length of received documents.
		*2	Auto	
025	REDUCTION RATIO	70	70%	Selecting the fixed print reduction ratio from 70% to 100%. This parameter functions only when the fixed print reduction is selected on Fax Parameter No.24 (PRINT REDUCTION).
		----	----	
		*100	100%	
026	POLLING PASSWORD		(----)	Setting 4 digits password for secured polling.
027	POLLED FILE SAVE	*1	Invalid	Selecting whether the machine retains the polled document in memory even after the document is polled once.
		2	Valid	
028	STAMP AT MEM. XMT	1	Invalid	Selecting whether the machine stamps the original documents when storing the documents into memory. (depending on the Stamp setting on the Control Panel. If the setting is “1:Invalid”, the machine will not stamp even if the Stamp LED light is ON)
		*2	Valid	
031	INC. FILE SAVE	*1	Invalid	Selecting whether the machine retains the document in memory if the document is not successfully transmitted.
		2	Valid	
034	ENERGY SAVER MODE	1	Invalid	Select Energy Saver mode and time. 1:Invalid / 2:Power Saver / 3:Sleep / 4:Shutdown Mode timer:1-240 min.
		2	Power Saver	
		*3	Sleep	
		4	Shutdown	

No.	Parameter	Setting Number	Setting	Comments
035	DAYLIGHT TIME	1	Off	Selects whether to enable the daylight time feature.
		*2	Mar 2nd	
		3	Apr 1st	
036	RING PATTERN(DRD)	*1	Invalid	All ring patterns.
		2	Valid	Select a ring pattern for automatic answering. **1 : A** Standard ring pattern. **2 : B** Double ring pattern. **3 : C** Triple ring pattern (Short-Short-Long). **4 : D** All other triple ring patterns, except the type C described above.
037	RCV TO MEMORY		(-----)	Enter 8 digits password used to print out the received document in memory by using Function 8-5 (RCV TO MEMORY). When Function 8-5 is set to ON, this parameter will not be shown on the LCD display. If you wish to change the password, Function 8-5 is set to OFF first.
038	ACCESS CODE		(-----)	Enter 8 digits Access Code to secure the machine from unauthorized use.
039	PIN CODE ACCESS	*1	None	Selecting the access method (Prefix or Suffix) to dial a number with PIN Code.
		2	Suffix	
		3	Prefix	
043	PASSWORD-XMT		(----)	Setting a 4-digit XMT-Password and selecting whether the machine performs and checks the XMT-Password of the receiving station when transmitting.
044	PASSWORD-RCV		(----)	Setting a 4-digit RCV-Password and selecting whether the machine performs and checks the RCV-Password of the transmitting station when receiving.
046	SELECT RCV	*1	Invalid	Selecting whether the machine performs selective reception.
		2	Valid	
052	DIAG. PASSWORD		(----)	Setting the password for Remote Diagnostic Mode. Please ask your Panasonic Authorized Dealer for details.
053	SUB-ADDRESS PSWD		(-----)	Setting a password (up to 20 digits) for secured sub-address communication.
054	FAX FORWARD	*1	Invalid	Selecting whether the machine performs Fax Forwarding to the specified destination.
		2	Valid	
056	COVER SHEET	*1	Off	Setting the home position of the Cover Sheet parameter in the Select Mode.
		2	On	
058	LANGUAGE	*1	A-ENGLISH	Selects the default message language for the display.
		2	C-FRENCH	
		3	SPANISH	
065	PRINT COLLATION	1	Invalid	Selecting whether the machine prints out documents in sequence.
		*2	Valid	
077	DEPARTMENT CODE	*1	Invalid	Selecting whether the machine performs the Department Code operation.
		2	Valid	

No.	Parameter	Setting Number	Setting	Comments
082	QUICK MEMORY XMT	1	Invalid	Selecting whether the machine performs Quick Memory XMT. **Invalid:** Stores all documents into memory first before dialing the telephone number. **Valid:** Starts dialing the telephone number immediately after storing the first page. This feature is not available when the Fax Parameter No.133 (JOB BUILD) is set to “2:On”.
		*2	Valid	
088	LINE SELECTION	*1	Auto	Selecting the transmitting telephone line when the optional G3 Communication Port Kit is installed. **Auto:** Selects the available telephone line for transmission automatically. **Line-1:** Selects Line-1 as the only transmitting telephone line. **Line-2:** Selects Line-2 as the only transmitting telephone line. **Note:** Regardless of the setting selection above, the unit will answer and receive on both telephone lines.
		2	Line-1	
		3	Line-2	
097	SPECIAL TRAY No.1	*1	None	Select a Special Tray that will not be used for printing received faxes (Tray 1 or 2). One Tray must always be available for receiving faxes. This setting is available when the optional 2nd Paper Feed Module is installed.
		2	Tray 1	
		3	Tray 2	
099	MEMORY SIZE	-	-	Displays the amount of Memory size.
117	MULTI STATION	1	Invalid	Selecting whether the machine allows sending the document to multiple destinations. If the setting is “1:Invalid”, the document can be sent to a single destination only.
		*2	Valid	
118	FAX FUNC. DETECT	1	Invalid	Setting the number of digits required to determine the entered number is a Fax Telephone Number. Upon detecting the specified number of digits, the machine will automatically switch to the Fax Mode when it is in the Copier Mode.
		2	4-Digits	
		3	5-Digits	
		*4	6-Digits	
		5	7-Digits	
		6	8-Digits	
119	QWERTY KEYBOARD	1	One-Touch	Selecting whether the QWERTY Keyboard functions as a One-Touch Dialing Keys or as Quick Name Search Keys of the station name. **One-Touch:** Each key (1~40) is assigned with an Email Address or a Telephone Number for quick dialing. **Quick Name Search:** Entering the first letter of the station. Search name for quick name search of the programmed station and quick dialing.
		*2	Quick Name Search	

No.	Parameter	Setting Number	Setting	Comments
121	AUTO RESET TIME	1	OFF	Selecting the control panel reset time.
		2	30 sec.	
		*3	1 min.	
		4	2 min.	
		5	3 min.	
		6	4 min.	
122	DIAL PREFIX		(----)	Setting the Dial Prefix number (Max. 4 digits). When the machine detects 10 digits telephone number (excluding any characters; such as “-”) being dialed, it will automatically append the preset Dial Prefix number. When the telephone number is less or more than 10 digits in length, the Dial Prefix number is not appended.
125	CONFIRM STATIONS	*1	Invalid	Selecting whether to confirm the destination. **Invalid:** The document can be sent without confirmation. **Valid:** The document cannot be sent unless the destination is confirmed.
		2	Valid	
126	USER AUTH Copy Fax Printer Scanner	*1	Invalid	Selecting whether use the User Authentication function for Copy, Fax, Printer, and Scanner.
		2	Valid	
132	VIA FAX SERVER	*1	Invalid	Selecting whether use the FAX Server.
		2	Valid	
133	JOB BUILD	*1	Off	Selecting whether the machine performs Job Build when the total number of documents exceed the maximum capacity of the ADF, or when scanning the documents manually one at a time. The Fax Parameter No.82 (QUICK MEMORY XMT) is not available when the Job Build is set to “2:On”.
		2	On	
135	01 JUNK FAX FILTER	*1	Invalid	Selecting whether the machine performs Junk Fax Filter function. If the setting is set to “Valid”, the machine disallows faxes from the senders whose numeric ID is registered as a junk fax number.
		2	Valid	
	02 RCV WITHOUT ID	1	Invalid	Selecting whether the machine allows fax reception from senders without numeric ID being registered. This feature is available when "01 Junk Fax Filter" is set to “2:Valid”.
		*2	Valid	
	03 RECEIVED ID PRINT	1	Invalid	Selecting whether the machine prints the sender’s numeric ID and received time at the bottom of the received faxes. If the sender’s numeric ID is not registered, only the received time is printed. This feature is available when “01 Junk Fax Filter” is set to “2:Valid”.
		*2	Valid	
	04 ID NO. REGIST		(----)	Registering a junk fax number. Up to 30 junk fax numbers can be registered. Up to 20 digits (including numbers, blank space, and + symbol) can be registered for a fax number.

No.	Parameter	Setting Number	Setting	Comments
136	RESTRICT D. DIAL	*1	Invalid	Selecting whether the machine allows a manual input of the destination and the use of the Redial button. If the setting is "2:Valid", manual input of the destination and the Redial button are not available. The Fax Parameter No.137 (RE-ENTER D. DIAL) is not available when the Restrict Direct Dial is set to "2:Valid".
		2	Valid	
137	RE-ENTER D. DIAL	*1	Invalid	Selecting whether the machine requires you to enter the destination twice. If the setting is "2:Valid", the machine requires you to enter the destination twice, and transmission takes place only when the entered destinations are matched. If the setting is "2:Valid", the Monitor button cannot be used. This feature is not available when the Fax Parameter No.136 (RESTRICT D. DIAL) is set to "2:Valid".
		2	Valid	
140	LAN RLY XMT REQ	*1	Invalid	Selecting whether the machine performs LAN Relay XMT Request.
		2	Valid	
142	RELAY XMT (A.K.A. LAN RELAY STATION ON UF-770I)	1	Invalid	Selecting whether the machine accepts and performs G3 Relayed Transmission. (Relay Station Functions)
		*2	Valid	
143	RELAY XMT REPORT	1	Off	Setting how the COMM. Journal for Relayed Transmission is sent to the originator. **Off:** Don't send. **Always:** Always send. **Inc. Only:** Send only if communication has failed.
		*2	Always	
		3	Inc. Only	
144	EMAIL CHAR. SET	1	Japanese	Selecting the Character Set when receiving or sending Email text.
		*2	English	
145	SENDER SELECTION	*1	Invalid	Selecting a pre-programmed sender's name and Email Address before each transmission.
		2	Valid	
146	POP TIMER	----	0 to 60 min.	Setting the time interval for the machine to check for Emails on the POP Server. (0 = Does not check the POP Server for Email.)
		*3		
147	AUTO POP RCV	1	Invalid	Selecting whether the machine automatically downloads an Email from the POP Server.
		*2	Valid	
148	DEL POP RCV MAIL	1	Invalid	Selecting whether the Email will be deleted automatically after retrieval from the POP Server.
		*2	Valid	
149	DEL POP ERR MAIL	*1	Invalid	Selecting whether to delete the Email that includes an incompatible file attachment from the POP Server.
		2	Valid	
150	IFAX RET RECEIPT	1	Invalid	Selecting whether to send a return receipt when receiving from another Panasonic Internet Fax.
		*2	Valid	
151	EMAIL HEADER FMT	1	All	Selecting the header information to print when an Email is received. (Normally used for Troubleshooting. It shows the path of the Email transmission before arriving at your machine.)
		*2	Subject / From / To	
		3	Off	

No.	Parameter	Setting Number	Setting	Comments
152	SUB-ADDR ROUTING	*1	Invalid	Selecting whether to automatically route a received Email using ITU-T sub-address.
		2	Valid	
153	TSI ROUTING	*1	Invalid	Selecting whether to route a received fax to an Email Address preprogrammed in Phone Book using the originating fax's Numeric ID (TSI frame information).
		2	Valid	
154	ROUTE HEADER FMT	*1	Originator	Selecting the type of Email header to be included in the "From" field of each routed faxes. **Originator:** The originating fax machine's TSI will appear in the "From" field of the routed Email. **Relay Station:** The routing station's Email address will appear in the "From" field of the routed Email.
		2	Relay Station	
155	PRINT ROUTED DOC	*1	Inc. Only	Selecting whether a received fax to be routed is always printed or only when the routing operation fails.
		2	Always	
156	PRT FORWARD DOC	*1	Inc. Only	Selecting whether a memory received fax or Email to be forwarded is always printed or only when forwarding is incomplete.
		2	Always	
157	TRANSACTION JRNL	*1	Invalid	Selecting whether the machine sends a transaction journal to the pre-programmed Email address.
		2	Valid	
158	PC REMOTE UPDATE	*1	Invalid	Selecting whether the machine will accept commands from an Email application to: (a) Program the Internet Parameters (b) Program the Auto Dialer (c) Allow retrieval of the Journal
		2	Valid	
159	SUBJ. LINE ENTRY	*1	Invalid	Selecting whether the "Subject" line can be programmed during each transmission.
		2	Valid	
160	DEFAULT DOMAIN	1	Invalid	Selecting whether the machine accepts to insert the Default Domain when entering Manual Number Dialing.
		*2	Valid	
161	DNS SERVER	1	Invalid	Selecting whether to use the DNS Server for the Internet communication.
		*2	Valid	
162	TIFF VIEWER URL	1	None	Selecting whether to include the URL address in the Email message body.
		*2	English	
		3	English+Japanese	
163	ROUTING HEADER	*1	Invalid	Selecting whether to add the Header Print information of the Routing Station on the top edge of each routed pages.
		2	Valid	
164	IFAX XMT HEADER (Email only)	*1	Included	Selecting whether to include the header when sending a document to an addressee in the same Domain as specified in the Default Domain parameter. (This is useful when using the machine to scan documents back to your PC) **Note:** When sending to a Domain other than as specified in the Default Domain parameter, the header will be included regardless of the selection.
		2	Not included	
168	CC/BCC STATION	*1	Invalid	Selecting whether to allow the CC/BCC Email address(es) to be entered.
		2	Valid	

No.	Parameter	Setting Number	Setting	Comments
169	DHCP CLIENT	1	Invalid	Select whether the machine would automatically acquire the Network Parameters from the DHCP Server. (Such as IP Address, Subnet Mask, Default Gateway IP Address, etc.) **Note:** If you change the setting of this parameter, the machine will reboot automatically.
		*2	Valid	
170	SMTP AUTHENTI.	*1	Invalid	If you transmit to the SMTP server, the user name and password are used for authentication. Selecting “2:Valid” allows you to set up the user name and password.
		2	Valid	
171	POP BEFORE SMTP	*1	Invalid	If you transmit to the SMTP server, POP User Name and POP Password are used for authentication.
		2	Valid	
172	DIRECT IFAX XMT	*1	Invalid	Selecting whether to be prompted during Phone Book registration if the station you are programming is to receive Internet Fax directly without going through a Mail Serv
		2	Valid	
173	DELIVERY NOTICE (HOME)	*1	Off	Setting the home position of whether to request a Message Disposition Notification (MDN) for a delivery processing confirmation indicating that the message (Email) was read, when sending an Email/Internet Fax. This setting will be the default value for the Select Mode (Function 8-2 (DELIVERY NOTICE)).
		2	On	
174	APOP AUTHENTI.	*1	Invalid	This parameter allows you to encrypt the protocol for the POP password security when connecting with the POP server.
		2	Valid	
177	XMT FILE TYPE	1	TIFF	Selecting whether the document(s) are converted to TIFF-F or PDF format when Scanning-to-Email, or TIFF-F format when sending to an Internet Fax. The default is “2:PDF” as PDF has become the industry standard for exchanging documents from computer to computer (Scan-to-Email). However, neither PDF format can be used tor Internet Faxing (Internet Fax to Internet Fax) as current Internet Fax specifications do not support these file formats, and TIFF-F format must be used when sending to an Internet Fax machine. This setting can be temporarily changed when sending an Internet Fax with the Select Mode (Fuction 8-6 (FILE TYPE/NAME)).
		*2	PDF	
182	SEND COMM. JOURNAL (UF-7200 only)	*1	Print	Selecting whether the Communication Journal is printed, emailed or both. **Print:** Prints. **Email:** Emails to the address selected in the Sender Selection. **Both:** Prints and Emails.
		2	E-mail	
		3	Both	

No.	Parameter	Setting Number	Setting	Comments
184	EMAIL REPORT (UF-8200 only)	*1	OFF	Selecting whether to send the transmission result notification by Email. If “NOT FOUND” is displayed on the LCD when specifying a station, check below. (1) The registered station name and the character strings entered when specifying a station are totally the same, including symbols and space. (2) The station registered as transmission result notification is an Email address. G3 FAX station cannot be used. **Note:** The transmission result notification cannot be sent to stations registered to use the Direct Internet Fax feature.
		2	ON	
186	IPv6	*1	Invalid	Selecting whether to use the IPv6 environment.
		2	Valid	
187	IPv6 AUTO CONFIG	1	Invalid	Selecting whether to automatically configure the IPv6-address setting.
		*2	Valid	

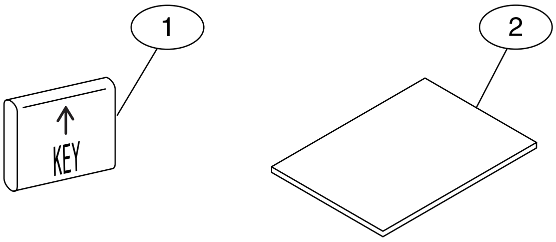
8 Options and Supplies

8.1. Installing the Internet Fax / Email / Network Scanner Module (UE-404093)

8.1.1. Contents

Visually check the condition and contents of the box for completeness, or for any shipping damage before starting the installation.
Remove all tapes, and the packing materials used to secure the units during shipment.
After unpacking, dispose of the packing materials appropriately.

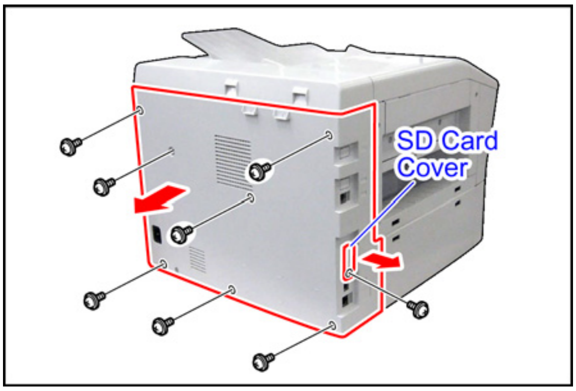
No.	Qty.	Description	Remarks
1	1	Hardware Key	NWS KEY
2	1	Installation Instructions	This document



Note:
Refer to the Parts Manual for Part Number(s), Packing, and Accessories in details.

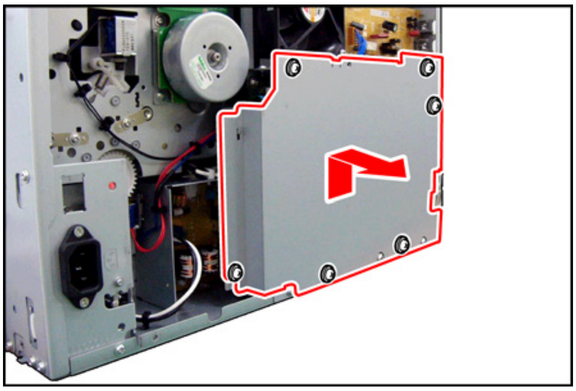
8.1.2. Installation

CAUTION!
Unplug the AC Power Cord before beginning installation.

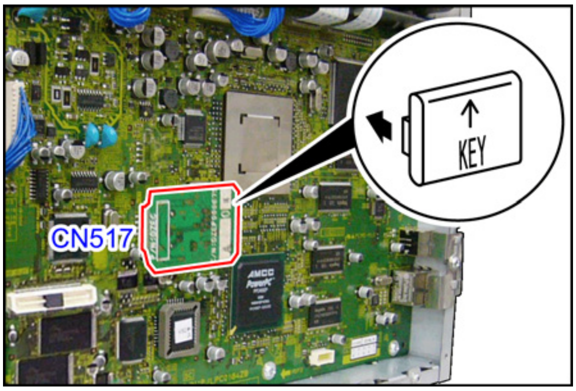


(1) Remove 1 **Screw**, and the **SD Card Cover**.
(2) Remove 7 **Screws**.
(3) Remove the **Rear Cover**.

Caution:
Remove the SD Memory Card if it was installed.



(4) Loosen 6 **Screws**.
(5) Remove the **SC Cover**.



(6) Install the **Hardware Key** into the connector (CN517) on the SC PC Board.

Caution:

The connector is keyed, to prevent damage to the SC PC Board, install the Hardware Key as illustrated. Do not force the Hardware Key into the connector if facing the wrong way.

(7) Proceed with the installation of other options. If finished, reinstall all **Harnesses** and **Covers**.

(8) Reinstall the **SD Memory Card** if it was removed.

(9) Plug the **AC Power Cord** first, then reconnect the **Telephone Line Cable**.

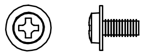
(10) Reconnect the **LAN / USB Cable(s)** if disconnected.

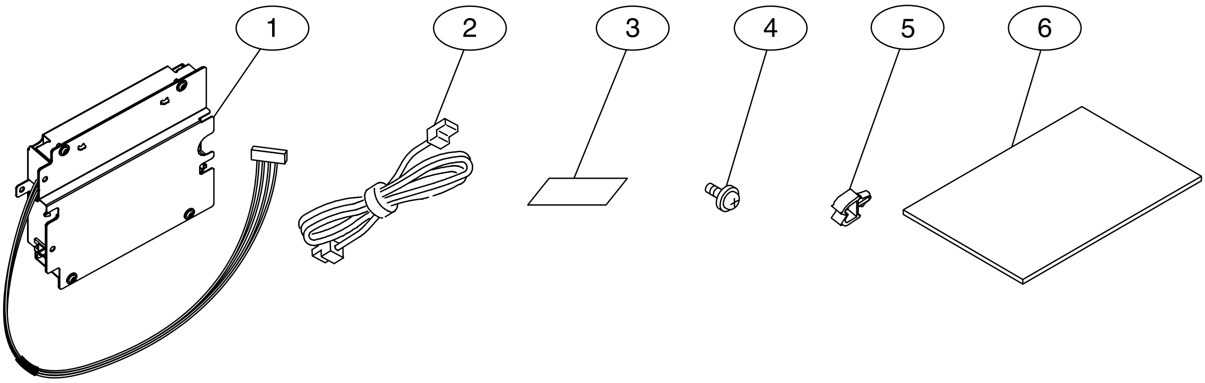
(11) Install the Internet Fax Software into the PC by following the prompts of the installation Wizard.
For details, refer to the Operating Instructions

8.2. Installing the G3 Communication Port Kit (UE-407029)

8.2.1. Contents

Visually check the condition and contents of the box for completeness, or for any shipping damage before starting the installation.
Remove all tapes, and the packing materials used to secure the units during shipment.
After unpacking, dispose of the packing materials appropriately.

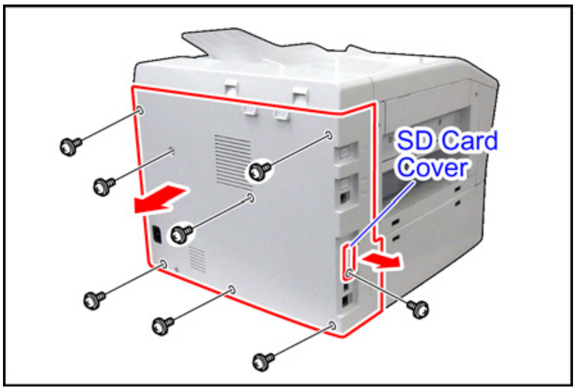
No.	Qty.	Description	Remarks
1	1	G3 Assembly	
2	1	Telephone Line Cable	
3	1	G3 Line Label	
4	3	Screw (M3 x 6)	
5	1	Harness Clamp	
6	1	Installation Instructions	This document



Note:
Refer to the Parts Manual for Part Number(s), Packing, and Accessories in details.

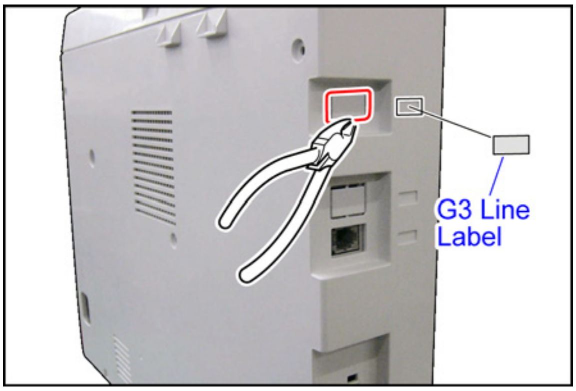
8.2.2. Installation

CAUTION!
Unplug the AC Power Cord before beginning installation.



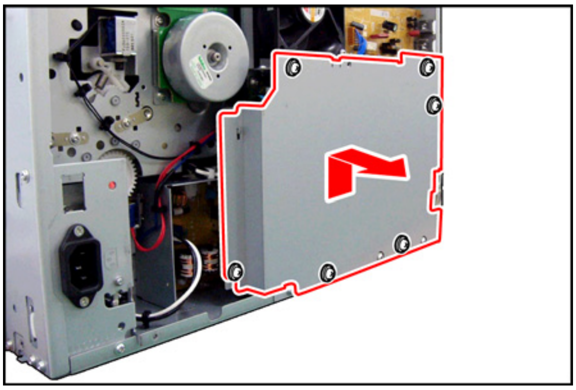
(1) Remove 1 **Screw**, and the **SD Card Cover**.
(2) Remove 7 **Screws**.
(3) Remove the **Rear Cover**.

Caution:
Remove the SD Memory Card if it was installed.



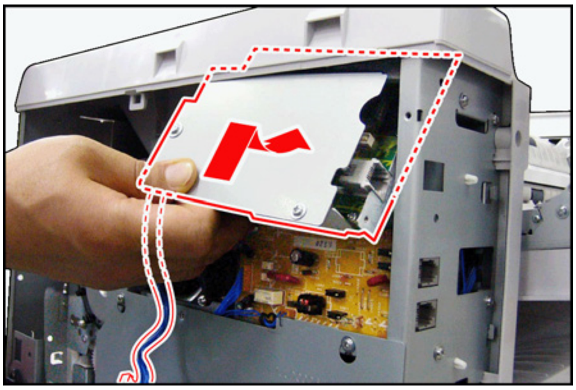
(4) Cut off the **Protective Tab** covering the **G3 Line Jack** on the Rear Cover.

(5) Attach the **G3 Line Label** onto the Rear Cover as illustrated.

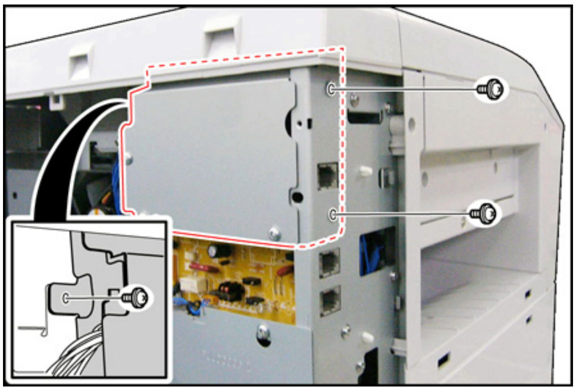


(6) Loosen 6 **Screws**.

(7) Remove the **SC Cover**.



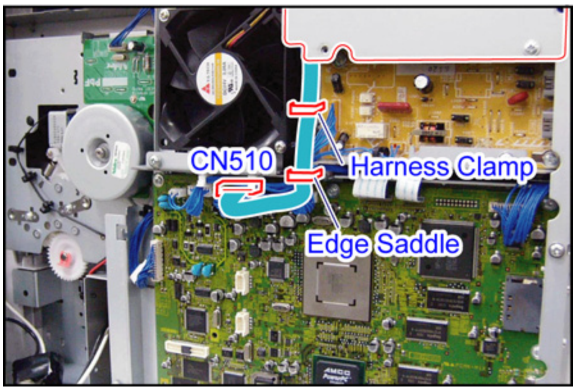
(8) Install the **G3 Assembly** as illustrated.



(9) Secure the **G3 Assembly** with 3 **Screws** (M3 x 6).

Note:

Secure 2 Screws on Right Rear Side first, and remaining 1 Screw.

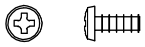
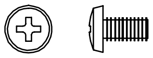
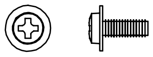


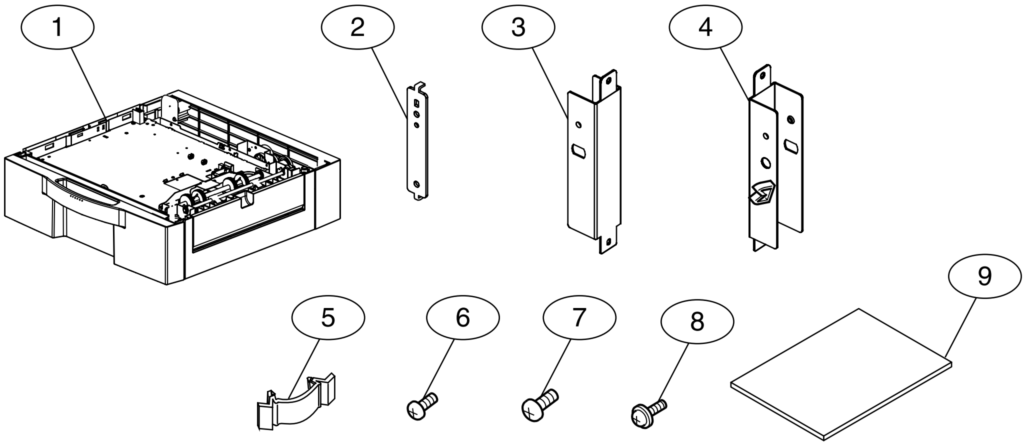
(10) Install the **Harness Clamp** and insert the G3 Harness into it as illustrated.
(11) Insert the **G3 Harness** into the Edge Saddle.
(12) Connect the **G3 Harness** to CN510 on the SC PC Board.
(13) Proceed with the installation of other options. If finished, reinstall all **Harnesses** and **Covers**.
(14) Reinstall the **SD Memory Card** if it was removed.
(15) Plug the **AC Power Cord** first, then reconnect the **Telephone Line Cable**.
(16) Reconnect the **LAN / USB Cable(s)** if disconnected.

8.3. Installing the 2nd Paper Feed Module (UE-409080)

8.3.1. Contents

Visually check the condition and contents of the box for completeness, or for any shipping damage before starting the installation.
Remove all tapes, and the packing materials used to secure the units during shipment.
After unpacking, dispose of the packing materials appropriately.

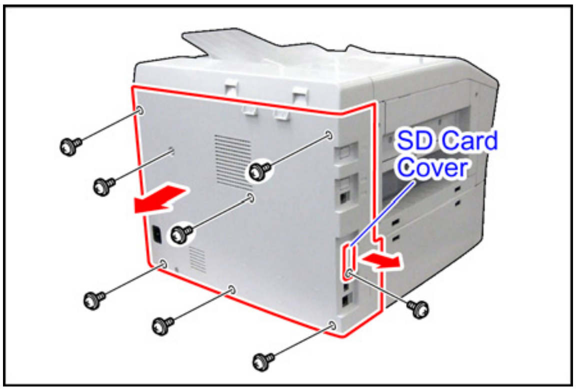
No.	Qty.	Description	Remarks
1	1	2nd Paper Feed Module	
2	2	Bracket F	
3	1	Bracket R1	
4	1	Bracket R2	
5	2	Flat Clamp	
6	4	Screw (M3 x 8)	
7	4	Screw (M4 x 8)	
8	2	Washer-head Screw	
9	1	Installation Instructions	This document



Note:
Refer to the Parts Manual for Part Number(s), Packing, and Accessories in details.

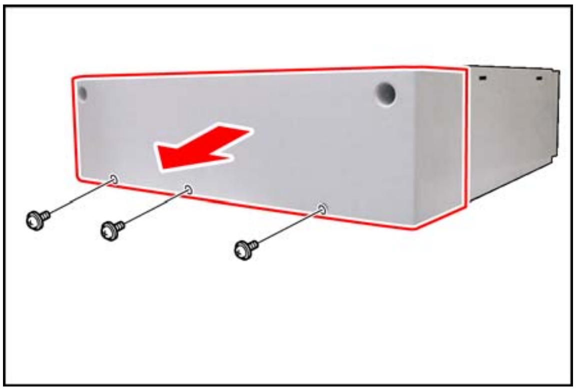
8.3.2. Installation

CAUTION!
Unplug the AC Power Cord before beginning installation.



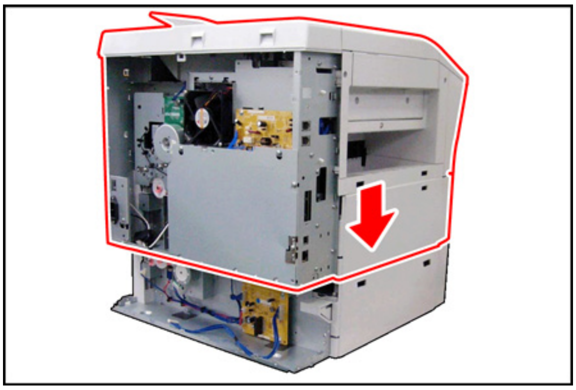
(1) Remove 1 **Screw**, and the **SD Card Cover**.
(2) Remove 7 **Screws**.
(3) Remove the **Rear Cover**.

Caution:
Remove the SD Memory Card if it was installed.

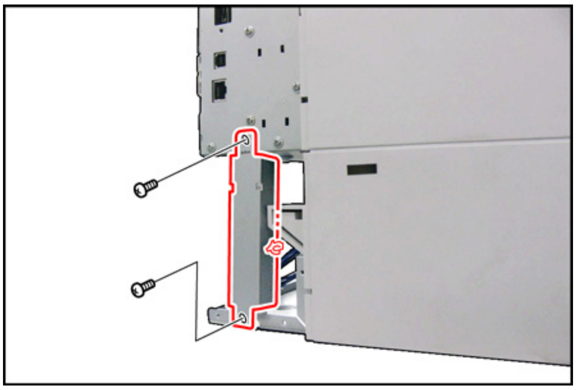


(4) Remove 3 **Screws**.

(5) Remove the **Rear Cover**.

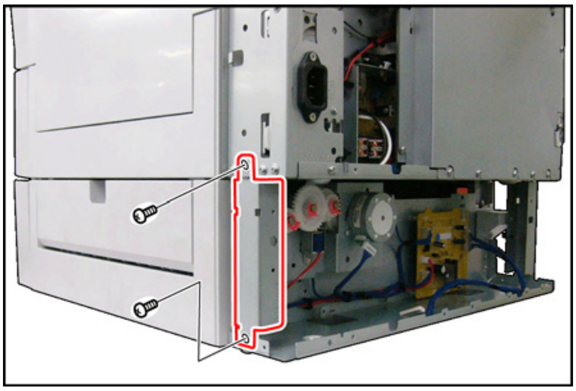


(6) Place the **machine** on top of the **2nd Paper Feed Module**.



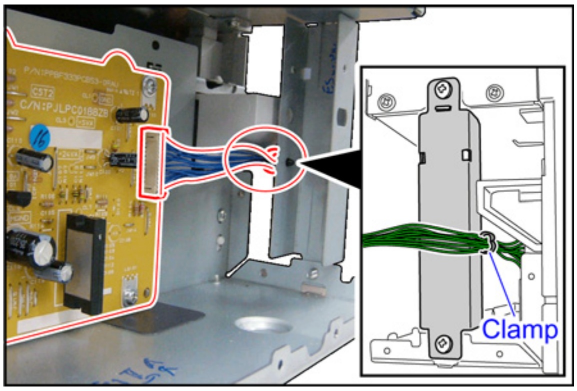
(7) Install the **Bracket R2** on the Left Rear Side as illustrated.

(8) Secure the **Bracket R2** with 2 **Screws** (M4 x 8).

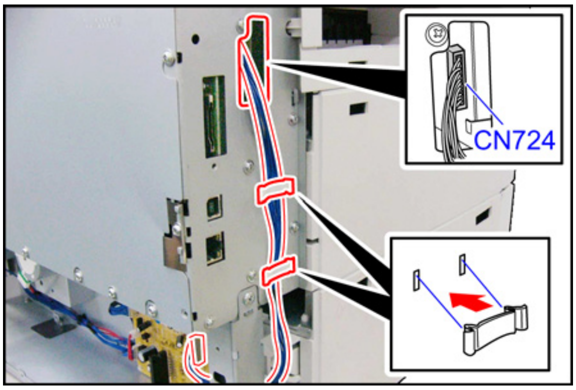


(9) Install the **Bracket R1** on the Right Rear Side as illustrated.

(10) Secure the **Bracket R1** with 2 **Screws** (M4 x 8).

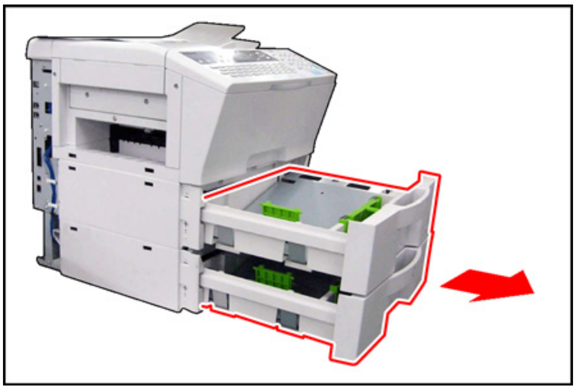


(11) Insert the **Harness** into the **Clamp**.

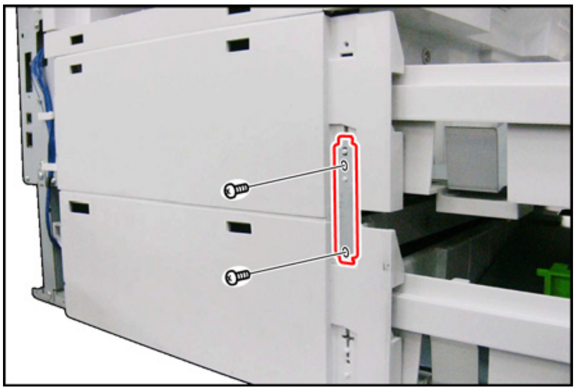


(12) Connect the **Harness** to CN724 on the SPC PC Board.

(13) Secure the **Harness** with 2 **Flat Clamps**.

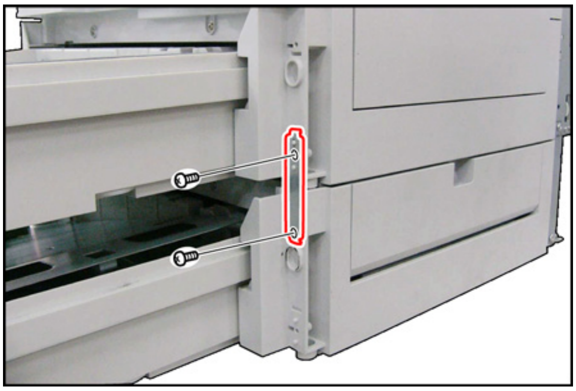


(14) Open the **1st** and **2nd Paper Trays**.



(15) Install the **Bracket F** on the Left Front Side as illustrated.

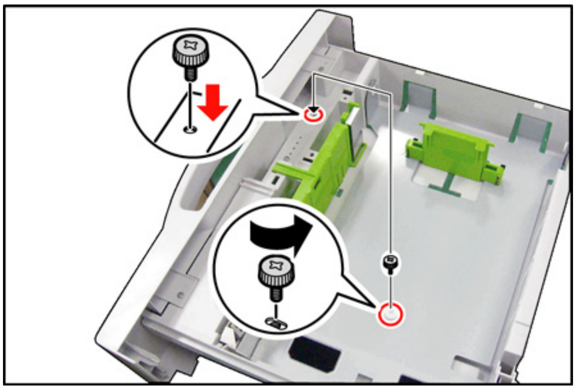
(16) Secure the **Bracket F** with 2 **Screws** (M3 x 8).



(17) Install the **Bracket F** on the Right Front Side as illustrated.

(18) Secure the **Bracket F** with 2 **Screws** (M3 x 8).

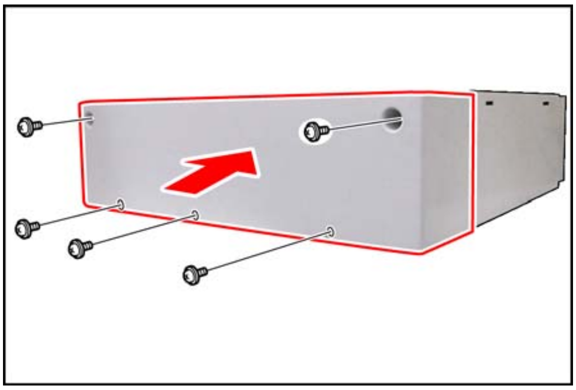
(19) Close the **1st Paper Tray**.



(20) Remove 1 **Screw**.

(21) Store 1 **Screw** removed in step (20) into the 2nd Paper Tray as illustrated.

(22) Insert Letter/A4 size paper into **2nd Paper Tray**, close the **2nd Paper Tray**.



(23) Proceed with the installation of other options. If finished, reinstall all **Harnesses** and **Covers**.

Note:
Secure the Rear Cover with Removed 3 Screws and 2 Washer-head Screws.

(24) Reinstall the **SD Memory Card** if it was removed.

(25) Plug the **AC Power Cord** first, then reconnect the **Telephone Line Cable**.

(26) Reconnect the **LAN / USB Cable(s)** if disconnected.

(27) Make a copy to confirm the operating of the **2nd Paper Tray**.

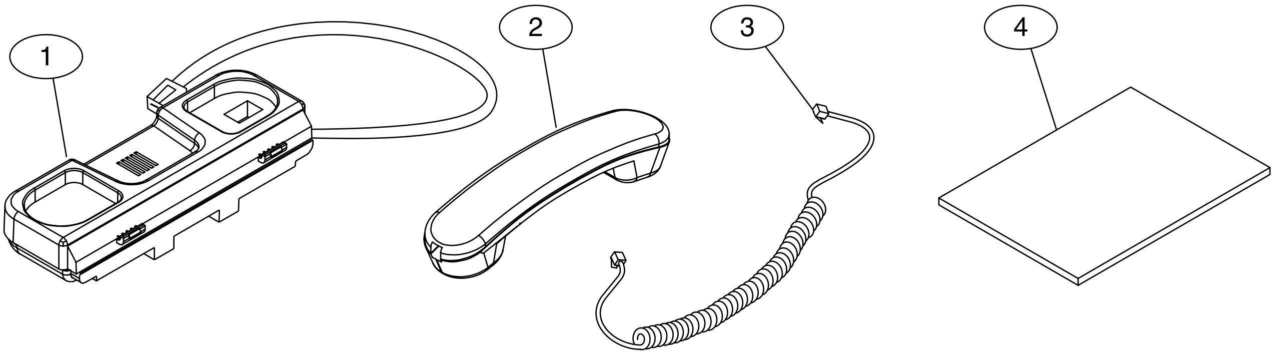
Note:
Pull out the 1st Paper Tray to disable.

8.4. Installing the Handset Kit (UE-403185)

8.4.1. Contents

Visually check the condition and contents of the box for completeness, or for any shipping damage before starting the installation.
Remove all tapes, and the packing materials used to secure the units during shipment.
After unpacking, dispose of the packing materials appropriately.

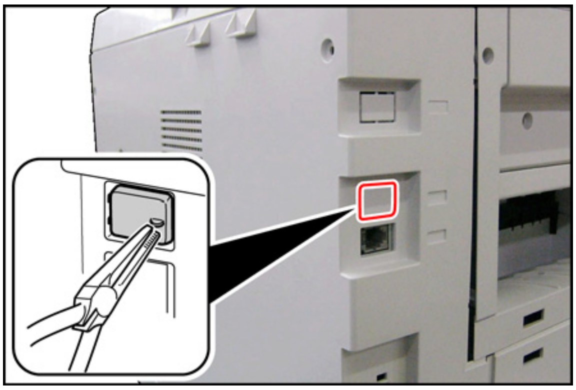
No.	Qty.	Description	Remarks
1	1	Cradle Assembly	
2	1	Handset	
3	1	Handset Cord	Installed to the Cradle Assembly
4	1	Installation Instructions	This document



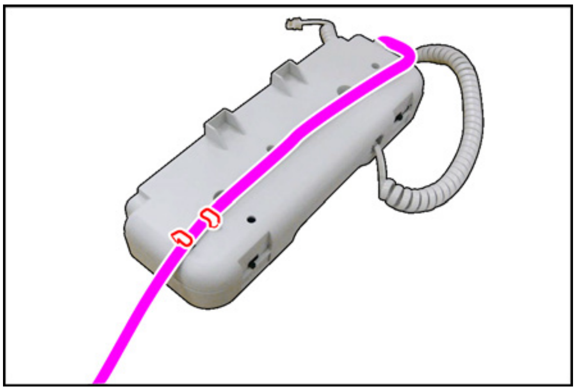
Note:
Refer to the Parts Manual for Part Number(s), Packing, and Accessories in details.

8.4.2. Installation

CAUTION!
Unplug the AC Power Cord before beginning installation.

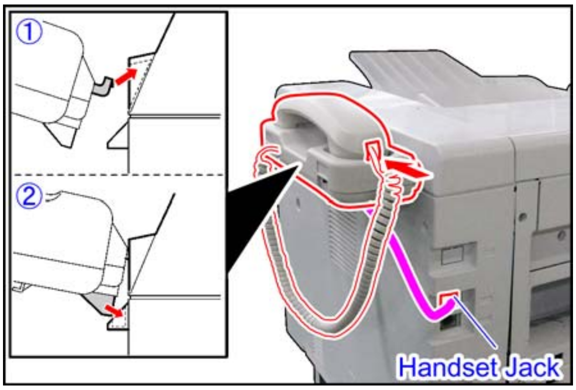


(1) Remove the **Protective Tab** covering the Handset Jack on the Rear Cover.



(2) Turn the **Cradle Assembly** upside down.

(3) Route the **Cradle Assembly Cord** along the 2 Hooks as illustrated.



(4) Hook the projections of the **Cradle Assembly** into the holes on the Rear Cover.

(5) Connect the **Handset Cord** to the Handset as illustrated.

(6) Connect the **Cradle Assembly Cord** to Handset Jack.

(7) Plug the **AC Power Cord** first, then reconnect the **Telephone Line Cable**.

(8) Reconnect the **LAN / USB Cable(s)** if disconnected.

8.5. Installing the SD Memory Card (32 MB up to 2 GB)

8.5.1. Contents

No.	Qty.	Description	Remarks
1	1	SD Memory Card (RP-SDxxx****)	32 MB - 2 GB

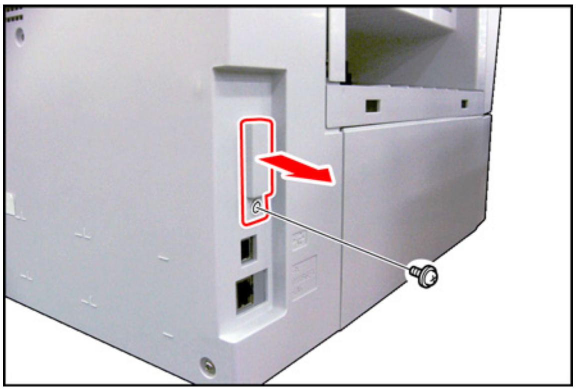
Note:

1. The Panasonic SD Memory Cards listed above are included for your reference only.
2. The suffix (****) may differ depending on the Destination.

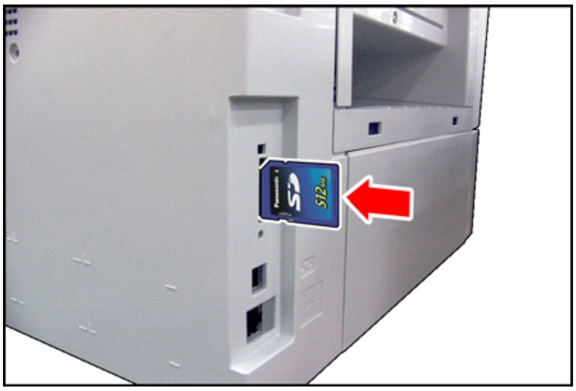
8.5.2. Installation

CAUTION!

Unplug the AC Power Cord before beginning installation



(1) Remove 1 **Screw**.
(2) Remove the **SD Card Cover**.



(3) Gently insert the **SD Memory Card** as illustrated (Logo facing toward the rea of the machine).

Caution:

Forcing the card into the slot may cause damage to the card or machine.

(4) Reinstall the **SD Card Cover** and 1 **Screw**.
(5) Plug the **AC Power Cord** first, then reconnect the **Telephone Line Cable**.
(6) Reconnect the **LAN / USB Cable(s)** if disconnected.

Caution:

Do not remove the SD Memory Card or turn the power OFF during Formatting or while Updating the Firmware.

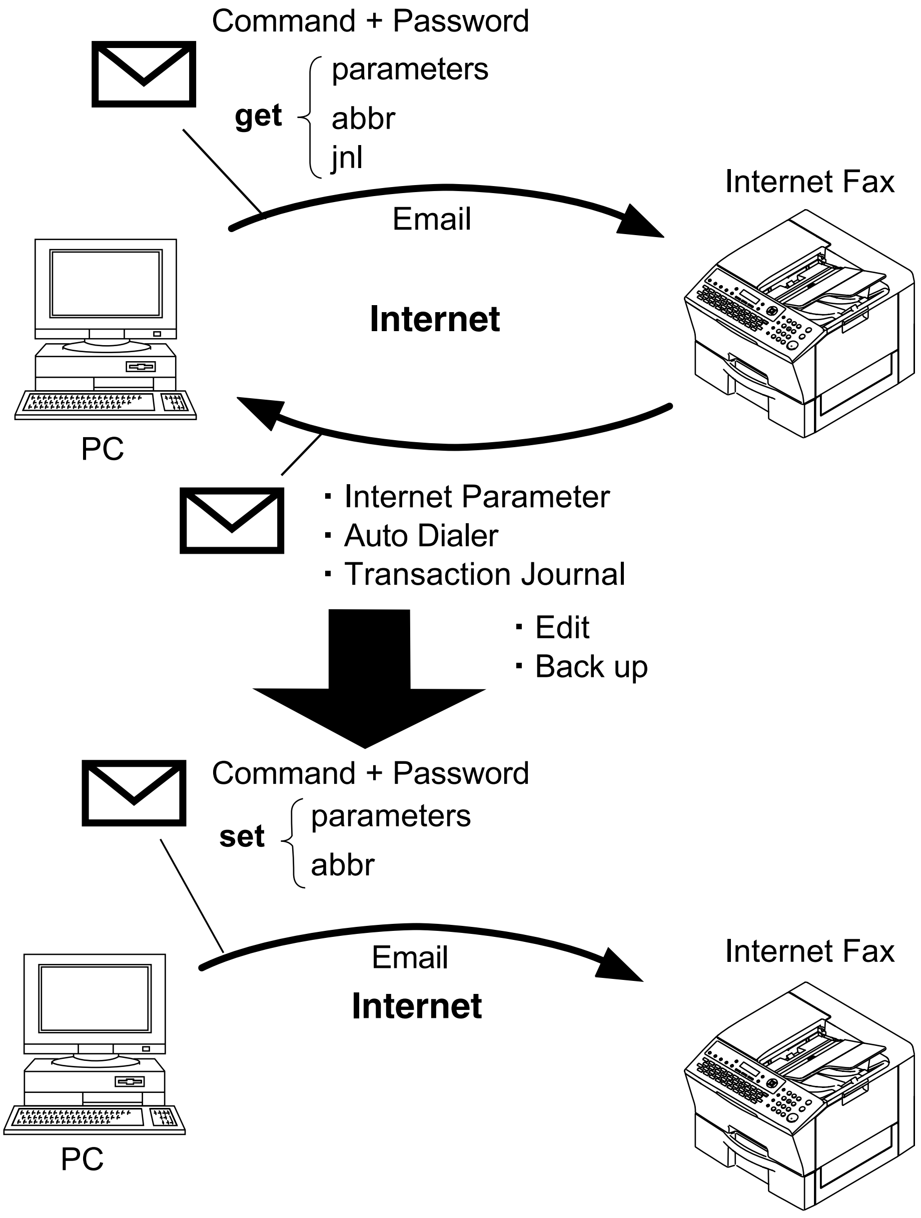
Note:

1. When a New (Blank) SD Memory Card is detected for the first time, a prompt for Formatting will appear on the LCD. The machine will format the SD Card for DATA (used for Fax Image, 1,000 Station Auto Dialer, JOB MIB Data, etc.), and it takes approximately 3 to 12 min. to format depending on the manufacturer, SD Memory Card size or Data Access Speed of the SD Card.
2. To Update the Firmware or to Format an SD Memory Card using the F9-15 Service Mode takes approximately 5 sec. Refer to 3.5.6. (Formatting the SD Memory Card).

9 Network Imfomation

9.1. Programming or Retrieving Parameters via Email

9.1.1. General Description


Command + Password
get
parameters
abbr
jnl
Email
Internet Fax
Internet
PC
· Internet Parameter
· Auto Dialer
· Transaction Journal
· Edit
· Back up
Command + Password
set
parameters
abbr
Email
Internet
Internet Fax
PC

9.1.2. Using Email to Program or Retrieve Parameters

This feature is a powerful tool, which provides a convenient and easy way of retrieving or programming Internet Parameters, Auto Dialer Dialing Numbers, Program keys and Journal retrieval from your PC by sending a text email message to your machine.Using your email application’s “Subject:” line as a command-input field, you can request your machine to perform the following commands:

	“Subject:” Line Command	Function
1	#set parameters(password)#	Programs the Internet Parameters
2	#get parameters(password)#	Retrieves the Internet Parameters
3	#set abbr(password)#	Programs the Auto Dialer
4	#get abbr(password)#	Retrieves the Auto Dialer Data
5	#get jnl(password)#	Retrieves the current Journal data

Where : “set” is used to program the data
“get” is used to retrieve the data
“parameters” represents Internet Parameters
“abbr” represents Auto Dialer
“jnl” represents Journal
“password” is the Remote Password programmed in your machine's User Parameters (i.e. 123456789). Must be enclosed within the parenthesis “( )”.
The command must be enclosed within the hash (#) signs.

9.1.3. Using a PC to Input the Internet Parameters Remotely

This feature provides a convenient and an easy way to input the Internet Parameters right from your PC by sending a text email message to your machine.The following parameters can be input remotely via a PC. The other parameters must be entered from the machine in the User Parameters.

- Sender Selection (up to 24 User Names)
- Default Domain
- Selectable Domains (up to 10 additional Domain Names)
- Remote Password
- Manager’s Email Address
- Relay XMT Password
- Relay Domain (up to 10 Domain Names authorized for Relay XMT Request)
- LDAP Server Name (Available for some countries only.)
- LDAP Login Name (Available for some countries only.)
- LDAP Password (Available for some countries only.)
- LDAP Search Base (Available for some countries only.)
- Community Name (up to 2 Community Names)
- Device Name
- Device Location

Your machine interprets the command that you enter in the "Subject" line of your email message and performs one of the following functions, it Retrieves or Stores data into the Internet Parameters (User Parameters).The two types of commands that can be entered in the "Subject" line of your email:

(1) To Store data, type :	#set parameters(password)# :	where the “password” is the Remote Password programmed in your machine's User Parameters (i.e. 123456789).You can enter the Internet Parameters shown above with this command the first time. However, if these fields already contain data, do not use this command as the existing information will be deleted and overwritten. Use the Retrieve command below instead.
(2) To Retrieve data, type :	#get parameters(password)# :	where the “password” is the Remote Password programmed in your machine's User Parameters (i.e. 123456789). Make sure that the CC..., Bcc... lines and the body of the email message is Blank.

Note:

To activate this feature, change the Fax Parameter No. 158 (PC Remote Update) to “Valid”.

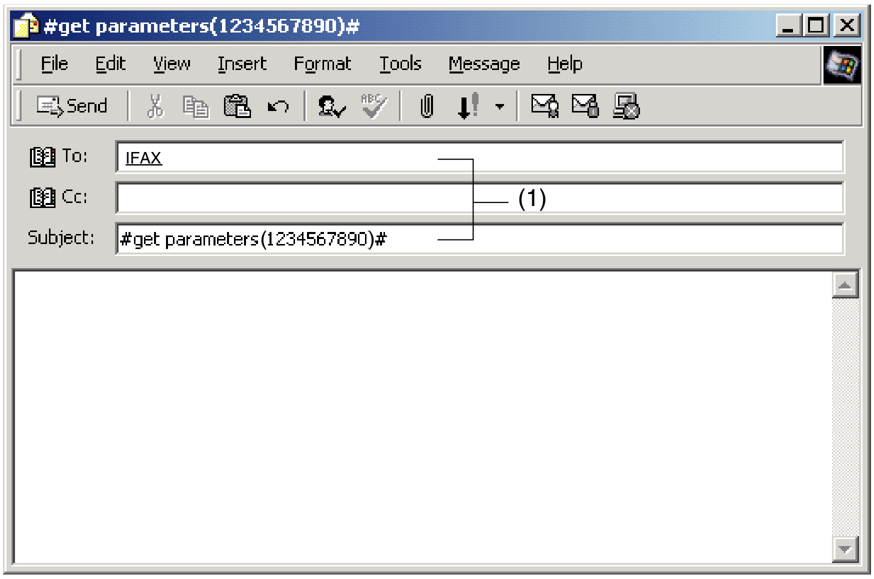
9.1.4. To Retrieve Each Parameters

To retrieve the existing parameters, send a plain text email to your machine's email address with the following command in the “Subject” line:

#get parameters(password)# : To retrieve the Internet Parameters
#get abbr(password)# : To retrieve the Auto Dialer
#get jnl(password)# : To retrieve the Journal (Transaction Journal)

: where the “password” is the Remote Password programmed in your machine's User Parameters (i.e. 123456789).
Make sure that the CC..., Bcc... lines and the body of the email message is Blank.

Ex: Internet Parameters



#get parameters(1234567890)#

To: IFAX
Cc:
Subject: #get parameters(1234567890)#

(1) To : Your machine's email address.
From : This field is normally not visible when creating new email message(s).It is your default email address (email application), for retrieving the Internet Parameters and for error message notification.(Can be programmed with the configuration tool of your email program.)
Subject : To Retrieve data, type : #get parameters(password)#
#get abbr(password)#
#get jnl(password)#

Using Email to Retrieve the Journal

The Journal will be sent back to the originating station’s email address.

After receiving the journal, use a fixed width font (i.e. Courier), in order to align the received journal’s contents on the PC.

9.1.5. To Edit the Retrieved or Backup Internet Parameters/Auto Dialer File

After receiving your machine’s email with the Internet Parameters and/or Auto Dialer, store the email file as text (.txt) on your PC for backup purposes.

To change or update the Internet Parameters and/or Auto Dialer, type the following command in the “Subject” line of your email and follow the steps below:

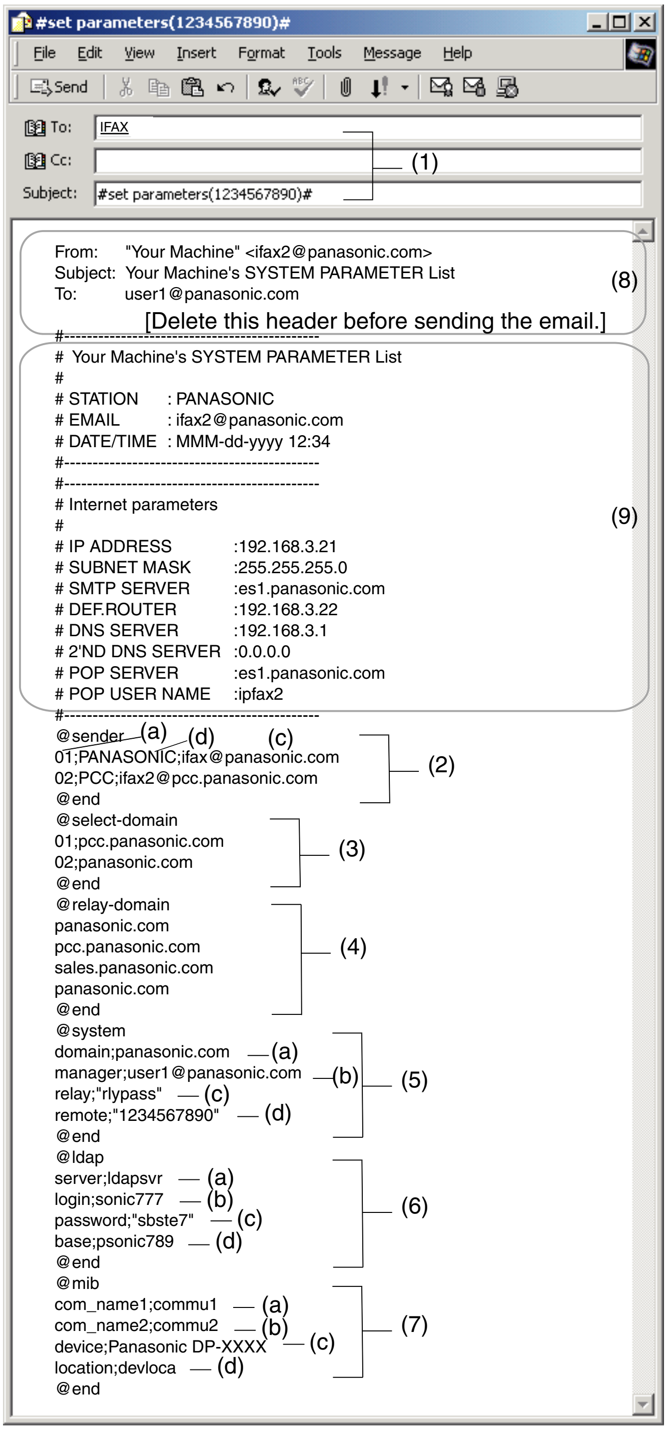
#set parameters(password)# : To store the Internet Parameters
#set abbr(password)# : To store the Auto Dialer

: where the "password" is the Remote Password programmed in your machine's User Parameters (i.e. 123456789).
Make sure that the CC..., Bcc... lines and the body of the email message are Blank.

1. Create a New Email Message, fill out the "To" and "From" Address line and the Subject line information for section (1) below:
   To : Your machine's email address.
   From : This field is normally not visible when creating new email message(s).
   It is your default email address (email application), for retrieving each Parameters and for error message notification.
   Subject : To Store data, type : #set parameters(password)#
   #set abbr(password)#
2. Open the backup, Internet Parameters and/or Auto Dialer text file. Copy the body text and paste it on the body of the newly created email message.
3. Delete any headers that may be present in the body of the email, as unsupported data will be rejected. The information following the “#” sign is ignored by your machine.
4. Edit a parameter and/or add additional parameters.
5. When finished, use the “File/Save as...” command and save the updated file with “.txt” extension as a backup.
6. Send the email message to your machine to update the Internet Parameters and/or Auto Dialer.

9.2. To Edit the Retrieved or Backup Internet Parameters File

Your Machine's Internet Parameters Email Sample



To: IFAX
Cc:
Subject: #set parameters(1234567890)#

```
From:     "Your Machine" <ifax2@panasonic.com>
Subject:  Your Machine's SYSTEM PARAMETER List
To:       user1@panasonic.com
              [Delete this header before sending the email.]
#---------------------------------------------
#  Your Machine's SYSTEM PARAMETER List
#
# STATION      : PANASONIC
# EMAIL        : ifax2@panasonic.com
# DATE/TIME  : MMM-dd-yyyy 12:34
#---------------------------------------------
#---------------------------------------------
# Internet parameters
#
# IP ADDRESS          :192.168.3.21
# SUBNET MASK         :255.255.255.0
# SMTP SERVER         :es1.panasonic.com
# DEF.ROUTER          :192.168.3.22
# DNS SERVER          :192.168.3.1
# 2'ND DNS SERVER  :0.0.0.0
# POP SERVER          :es1.panasonic.com
# POP USER NAME     :ipfax2
#---------------------------------------------
@sender
01;PANASONIC;ifax@panasonic.com
02;PCC;ifax2@pcc.panasonic.com
@end
@select-domain
01;pcc.panasonic.com
02;panasonic.com
@end
@relay-domain
panasonic.com
pcc.panasonic.com
sales.panasonic.com
panasonic.com
@end
@system
domain;panasonic.com
manager;user1@panasonic.com
relay;"rlypass"
remote;"1234567890"
@end
@ldap
server;ldapsvr
login;sonic777
password;"sbste7"
base;psonic789
@end
@mib
com_name1;commu1
com_name2;commu2
device;Panasonic DP-XXXX
location;devloca
@end
```

(1) To : Your machine's email address.

From : This field is normally not visible when creating new email message(s). It is your default email address (email application), for retrieving the Internet Parameters and for error message notification.
(Can be programmed with the configuration tool of your email program.)

Subject : To Store data, type : #set parameters(password)#

(2) @sender to @end : Defines the Sender information to be set in section (2) between @sender to @end block. Edit, Delete or Register up to 24 User Names and their Email Addresses for the Sender Selection feature.
Separate each data field with a semicolon (;). (If the remaining fields are to remain blank, insert a semicolon (;) for each blank field.)

The data string for each Sender Selection should be defined within a single line.
The syntax is : <Sender Selection Number> ; <User Name> ; <Email Address>
(a) 01 to 24 : Indicates the Sender Selection Numbers
(b) User Name (25 characters maximum)
(c) Email Address (60 characters maximum)

(3) @select-domain to @end : Defines the Selectable Domains to be set in section (3) between @select-domain to @end block. Register up to 10 alternate Domain Names that can be selected during manual email addressing. (30 characters maximum)The syntax is : <Number> ; <Domain>

(4) @relay-domain to @end : Defines the Domain Names to be set in section (4) between @relay-domain to @end block. Register up to 10 Domain Names that have been authorized to access your machine for Relayed XMT Request. (30 characters maximum)

(5) @system to @end : Defines the Internet Parameters to be set in section (5) between @system to @end block. Register the following Internet Parameters.
(a) Default Domain (50 characters maximum).
The syntax is : domain; <Default domain name>
(b) Manager’s Email Address (60 characters maximum).
The syntax is : manager; <Manager’s Email Address>
(c) Relay XMT Password (10 characters maximum).
The syntax is : relay; <Relay XMT Password>. Quotation marks “ ” enclosing the password, required.
(d) Remote Password (10 characters maximum).
The syntax is : remote; <Remote Password>. Quotation marks “ ” enclosing the password, is required.

(6) @ldap to@end : Defines the LDAP Parameters to be set in section (6) between @ldap to @end block. Register the following Internet Parameters.
(a) LDAP Server Name (60 characters maximum).
The syntax is : server; <LDAP Server Name>
(b) LDAP Login Name (40 characters maximum).
The syntax is : login; <LDAP Login Name>
(c) DAP Password (10 characters maximum).
The syntax is : password; <LDAP Password>. Quotation marks “ ” enclosing the password, is required, as shown in the example above.
(d) LDAP Search Base (60 characters maximum).
The syntax is:base; <LDAP Search Base>

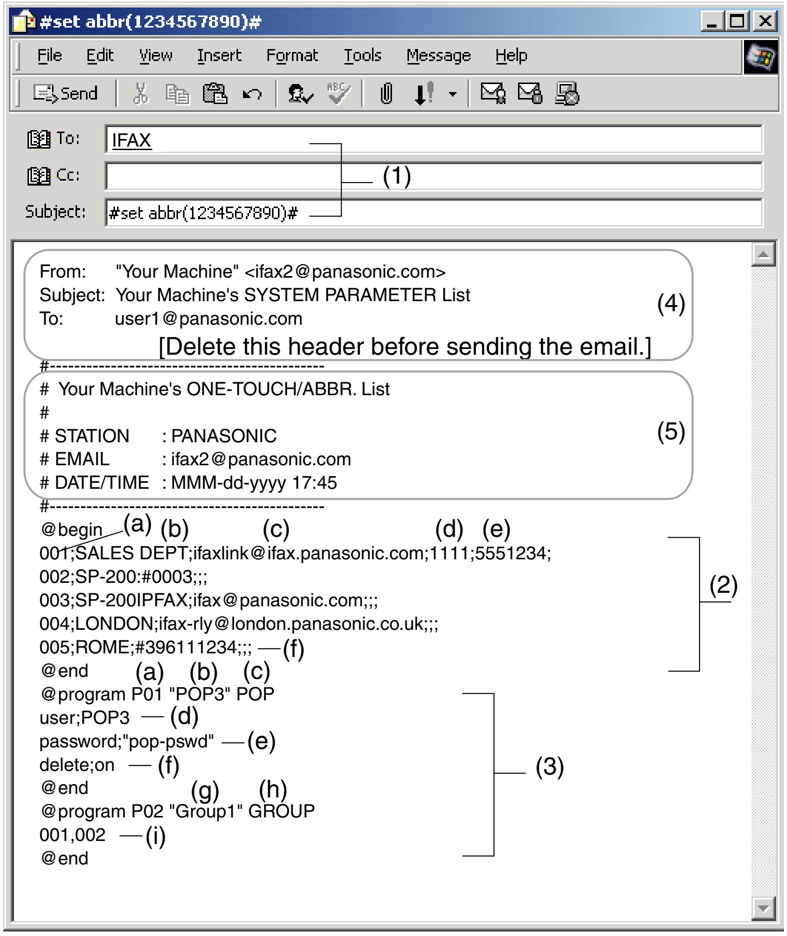
(7) @mib to @end : Defines the MIB to be set in section (7) between @mib to @end block. Register the following Internet Parameters.
(a) Community Name (1) (32 characters maximum).
The syntax is : com_name1; <Community Name (1)>
(b) Community Name (2) (32 characters maximum).
The syntax is : com_name2; <Community Name (2)>
(c) Device Name (32 characters maximum).
The syntax is : device; <Device Name>
(d) Device Location (32 characters maximum).
The syntax is : location; <Device Location>

(8) This header must be deleted before the email is sent to your machine for reprogramming of Internet Parameters.

(9) The information following the “#” sign is ignored by your machine, therefore, you can leave it as is, or delete it if you wish.

9.3. To Edit the Retrieved or Backup Auto Dialer Data File

Your Machine’s Address Book (Auto Dialer) Email Sample



To: IFAX
Cc:
Subject: #set abbr(1234567890)#

```
From:     "Your Machine" <ifax2@panasonic.com>
Subject:  Your Machine's SYSTEM PARAMETER List
To:       user1@panasonic.com
                [Delete this header before sending the email.]
#---------------------------------------------
#  Your Machine's ONE-TOUCH/ABBR. List
#
# STATION      : PANASONIC
# EMAIL        : ifax2@panasonic.com
# DATE/TIME    : MMM-dd-yyyy 17:45
#---------------------------------------------
@begin
001;SALES DEPT;ifaxlink@ifax.panasonic.com;1111;5551234;
002;SP-200:#0003;;;
003;SP-200IPFAX;ifax@panasonic.com;;;
004;LONDON;ifax-rly@london.panasonic.co.uk;;;
005;ROME;#396111234;;;
@end
@program P01 "POP3" POP
user;POP3
password;"pop-pswd"
delete;on
@end
@program P02 "Group1" GROUP
001,002
@end
```

(1) To : Your machine's email address.

From : This field is normally not visible when creating new email message(s). It is your default email address (email application), for retrieving the Auto Dialer data and for error message notification. (Can be programmed with the configuration tool of your email program.)

Subject : To Store data, type : #set abbr(password)#

(2) @begin to @end block : Defines the Auto Dialer to be set in section (2) between @begin to @end block.

Edit, Delete or Register the information.

Separate each data field with a semicolon (;). (If the remaining fields are to remain blank, insert a semi-colon (;) for each blank field)

The data string for each station should be defined within a single line.

The syntax is : <Entry-number> ; <Station-name> ; <Station-address>; <Routing-subaddress> ; <Routing-id-number>

(a) Entry-number: One-Touch, ABBR. No. or Program Keys to be programmed001 to 200 : indicates ABBR. No.s 001 to 200 (200 stations maximum)
(001 to 920 : When the SD Media Card Memory is installed)
2001 to 2080 : indicates One-Touch numbers from 01 to 80
Program Keys (P1 to P80 common used with the One-Touch keys)

(b) Station-name : Name of the station being programmed (15 alpha-numeric characters maximum)

(c) Station-address : email address or telephone number of the station being programmed

(d) Routing-subaddress : sub-address to be used for routing (20-digit maximum)
(e) outing-id-number : TSI to be used for routing (20-digit maximum)
(f) The End Receiving Station's telephone number is entered after the hash sign (#).

(3) @program to @end : Defines the Program Keys stored as a Group Key or POP Access Key to be set in section (3) between @program to @end block.
Edit, Delete or Register the information.
(a) Program Key: P01 - P80 (Common used with the One-Touch Keys)
(b) Station-name as a POP Key : Some as (d) POP User-name.
(c) POP : The syntax used to set the Program Key as a POP Access Key.
(d) POP User-name : Name of the POP user account (40 alpha-numeric characters maximum)
(e) POP Password : POP Password (10 alpha-numeric characters maximum)
(f) Set whether the emails on the POP Server are deleted after retrieving the emails.
(g) Station-name as a Group Key : Name of the station being programmed (15 alpha-numeric characters maximum)
(h) GROUP : The syntax used to set the Program Key as a Group Key
(i) Entry-number : One-Touch, ABBR. No. or Program Keys to be programmed001 to 200: indicates ABBR. No.s 001 to 200 (200 stations maximum)
(001 to 920 : When the SD Memory Card is installed)
2001 to 2080 : indicates One-Touch numbers from 01 to 80

(4) This header must be deleted before the email is sent to your machine for reprogramming of Auto Dialer.

(5) The information following the "#" sign is ignored by your machine, therefore, you can leave it as is or delete it if you wish.

Note:

1. The email address and the telephone number cannot be programmed via email when
   - Auto Dialer Number has been used for communication reservation.
   - Received documents are stored in the image data memory of the machine.
   - While the machine is communicating or printing.
2. When the email address and telephone number are programmed via email, a program result email is sent back.
3. Some email applications automatically insert a line feed in the middle of a line when the number of characters in a line exceed a specific number. Turn "Off" the automatic line feed, or define the number of characters per line to prevent a line feed, or the data will be ignored.

9.3.1. Deleting the Entire Auto Dialer

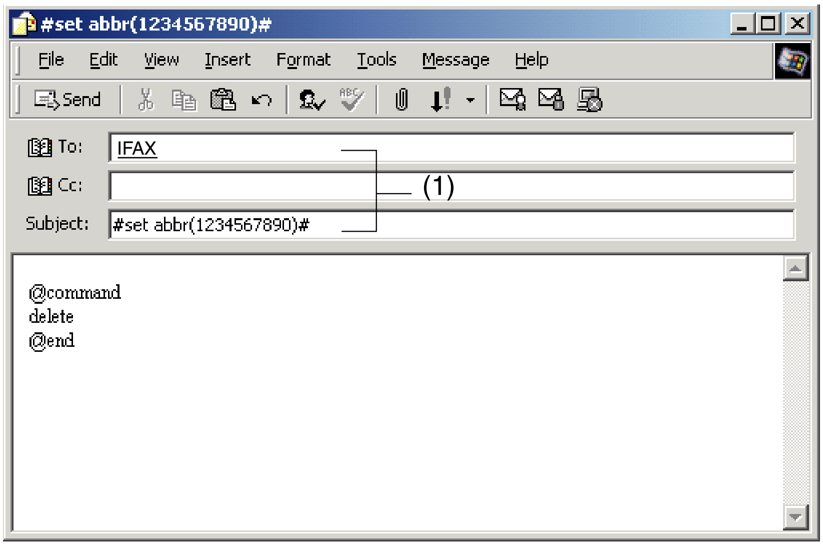
If you wish to delete the entire Auto Dialer data in your machine, type the following command in the body of the email message:

```
@command
delete
@end
```

This command can also be inserted before the @begin to @end block, to erase the entire Auto Dialer data first, then reprogram it with new data.
This method will also prevent the "Overwrite Warning Message" that is sent back from your machine, when the current Auto Dialer station is overwritten.

To erase the entire Auto Dialer data, type the following command in the "Subject" line of your email:

#set abbr(password)# : Where the password is the Remote Password programmed in your machine's User Parameters. Retrieve and backup the existing data onto your PC first by following the procedures for Retrieving and Editing.


#set abbr(1234567890)#
File
Edit
View
Insert
Format
Tools
Message
Help
Send
(1)

To: IFAX

Cc:

Subject: #set abbr(1234567890)#

```
@command
delete
@end
```

(1) To : Your machine's email address.

From : This field is normally not visible when creating new email message(s).
It is your default email address (email application), for retrieving the Auto dialer data and for error message notification.
(Can be programmed with the configuration tool of your email program.)

Subject : To Delete data, type : #set abbr(password)#

9.4. Error Message

9.4.1. Error Message Sent to the Sender

Error messages that are emailed from your machine to the original sender during remote programming of the Auto Dialer via email.

	Error Message	Possible Cause / Action
1	554 Data Transfer Error (broken Header)	The header or sub header decoding is being processed while the message finished, try again.
2	554 Data Transfer Error (broken Data)	Multiple contents are present and being processed while the message finished, try again.
3	554 Data Transfer Error (FAX module)	Data transfer error occurred in the FAX module while communicating with the LAN module, try again.
4	554 MIME attachment not supported (message/file)	MIME attachment is not supported during this operation, resend using plain text in the message body only.
5	554 MIME format not supported	MIME file type is not supported, resend using plain text in the message body only.
6	554 G3 Relay permission denied	The requested domain for Relayed Transmission is not registered.
7	554 Relay Address unknown	The telephone number of end receiving station for the Relayed Transmission is unknown.
8	554 Memory Full (FAX module)	FAX Memory is full, try again later.
9	554 Data Transfer Error	Other errors not listed above, try again later.

9.4.2. Internet Fax Return Receipt Error Messages

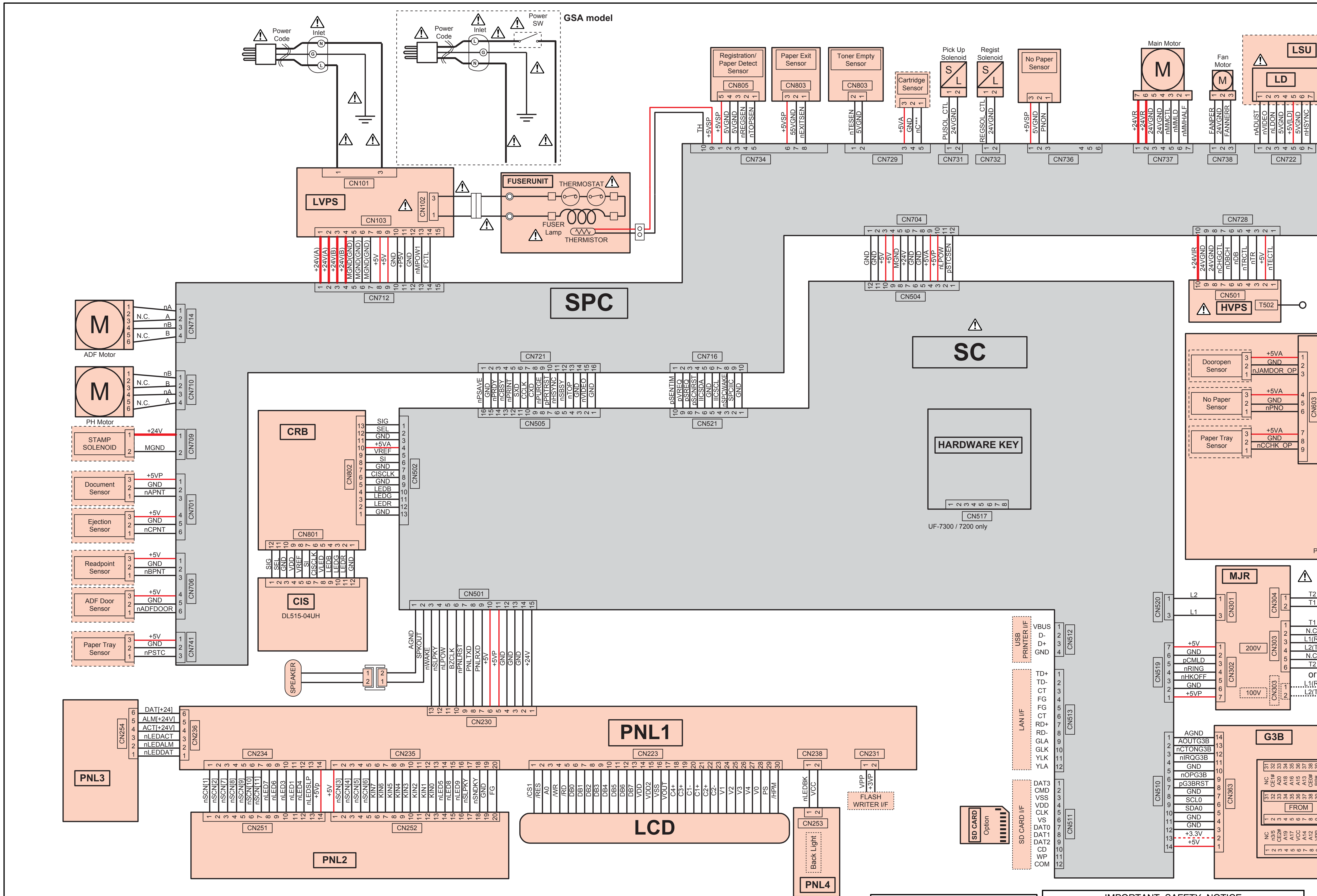
Error messages that are printed on the Internet Fax Return Receipt when remote programming of the Auto Dialer via Email fails.

	Error Message	Possible Cause / Action
1	Format Error : <@command block, the “@end” command is missing.>	The block termination command “@end” is missing in the “@command” block, add the “@end” command and try again.
2	Format Error : <@begin block, the “@begin” command is missing.>	The block start command “@begin” is missing in the “@begin” block, add the “@begin” command and try again.
3	Format Error : <@begin block, the “@end” command is missing.>	The block termination command “@end” is missing in the “@begin” block, add the “@end” command and try again.
4	Format Error : <@system block, the “@end” command is missing.>	The block termination command “@end” is missing in the “@system” block, add the “@end” command and try again.
5	Format Error : <@sender block, the “@end” command is missing.>	The block termination command “@end” is missing in the “@sender” block, add the “@end” command and try again.
6	Format Error :<@domain block, the “@end” command is missing.>	The block termination command “@end” is missing in the “@domain” block, add the “@end” command and try again.
7	Format Error : <@program block, the “@end” command is missing.>	The block termination command “@end” is missing in the “@program” block, add the “@end” command and try again.
8	Format Error : <@system block, the “@system” command is missing.>	The system block start command “@system” is missing in the “@system” block, add the “@system” command and try again.
9	Permission denied : <054 Fax Forward parameter is set to “Valid”.>	Set the Fax Forward parameter to “Invalid”.
10	Permission denied : <Fax machine is busy performing a task.>	Try again later when the machine is not busy.

	Error Message	Possible Cause / Action
11	Error : <Programmed ABBR overwrite prohibited. Use open ABBR only.>	Cannot overwrite existing programmed data, use the “Delete” command to erase the existing data first.
12	Permission denied : <Password is incorrect.>	Correct the password and try again.
13	Permission denied : <158 PC Remote Dialer Update parameter is set to “Invalid”.>	Set the PC Remote Update parameter to “Valid”.
14	Format Error : <error line>	The format of the Entry is incorrect / incomplete or the data string for each station is not defined within a single line.
15	Warning : <error line>	The format of the Entry is incorrect or the number of characters entered, exceed the maximum allowed in the field. Correct it and try again.
16	Warning : Field limit exceeded<error line>	The maximum number of Station Name, Domain Name, Sender Name, Program Name, etc. were exceeded.

10 Schematic Diagram

10.1. General Circuit Diagram


Power Code
Inlet
Power SW
GSA model
LVPS
CN101
CN103
CN102
FUSERUNIT
THERMOSTAT
FUSER Lamp
THERMISTOR
Registration/ Paper Detect Sensor
Paper Exit Sensor
Toner Empty Sensor
Cartridge Sensor
Pick Up Solenoid
Regist Solenoid
No Paper Sensor
Main Motor
Fan Motor
LSU
LD
Polygon Motor
Door Interlock SW
CN734
CN729
CN731
CN732
CN736
CN737
CN738
CN722
CN730
CN726
SPC
CN712
CN704
CN504
CN728
CN501
HVPS
T502
CN724
SC
HARDWARE KEY
CN517
UF-7300 / 7200 only
ADF Motor
PH Motor
STAMP SOLENOID
Document Sensor
Ejection Sensor
Readpoint Sensor
ADF Door Sensor
Paper Tray Sensor
CN714
CN710
CN709
CN701
CN706
CN741
CRB
CN802
CN801
CN502
CIS
DL515-04UH
CN721
CN505
CN716
CN521
SPEAKER
CN230
PNL1
PNL3
CN254
CN236
CN234
CN235
CN223
CN238
CN231
CN251
CN252
PNL2
LCD
CN253
Back Light
PNL4
UF-8300 / 8200 only
FLASH WRITER I/F
SD CARD Option
SD CARD I/F
LAN I/F
USB PRINTER I/F
CN512
CN513
CN511
CN510
CN519
CN520
Dooropen Sensor
No Paper Sensor
Paper Tray Sensor
CN602
CN603
2nd Feeder
CN601
CN600
Pick Up Solenoid
2nd Feeder Motor
2nd Paper Feeder Module (Option)
MJR
CN301
CN302
CN303
CN304
200V
100V
TEL
LINE
or
G3B
CN361
CN363
FROM
FROM SLOT

━━	120 / 220-240 VAC
🟥	+24 VDC
┅┅	+12 VDC
┄┄	+5 VDC
‐‐‐	+3.3 VDC

IMPORTANT SAFETY NOTICE

PARTS WITH A ⚠ MARK ON THIS SCHEMATIC DIAGRAM INCORPORATE SPECIAL FEATURES IMPORTANT FOR SAFETY. WHEN SERVICING, IT IS ESSENTIAL THAT ONLY MANUFACTURER'S SPECIFIED PARTS ARE USED FOR THE CRITICAL COMPONENTS IN THE PARTS IDENTIFIED WITH A ⚠ MARK IN THE SCHEMATIC.

Model	Drawing Name
UF-8300/8200 UF-7300/7200	General Circuit Diagram

memo

Panasonic

Software

Operating Instructions

Network Firmware Update Tool
for Service Technicians

Version 3

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1st Edition :	2002 March 20
2nd Edition :	2002 August 1
3rd Edition :	2002 December 5
4th Edition :	2003 April 10
5th Edition :	2003 April 22
6th Edition :	2003 December 18
7th Edition :	2004 April 7
8th Edition :	2004 August 3
9th Edition :	2004 August 20
10th Edition :	2004 October 22
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12th Edition :	2006 March 27
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14th Edition :	2006 June 26
15th Edition :	2007 September 17

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The contents of these Operating Instructions are subject to change without notice.

1. General

The Network Firmware Update Tool allows a PC or laptop connected via LAN (TCP/IP) to a Panasonic Fax/MFP to quickly program the Firmware Code directly to the memory of the device.

1.1 Supported Operating Systems

This application software operation has been confirmed under the following Operating Systems

- Windows® 2000
- Windows® XP
- Windows Server® 2003
- Windows Vista®

1.2 Supported Panasonic Fax/MFP Models

- Please refer to the service manual of each model

2. Installation

2.1 Installing the Network Firmware Update Tool

1. Start Microsoft Windows.

   Log on to the computer/network from an account with Administrator privileges.

2. Locate and Run the **Setup (.exe)** program for **Network Firmware Update Utility** in the software setup disk or folder.

3. Follow the instructions on your screen to install the program.

4. A confirmation message is displayed when the installation is completed.
   When prompted to do so, allow the program to restart your PC.

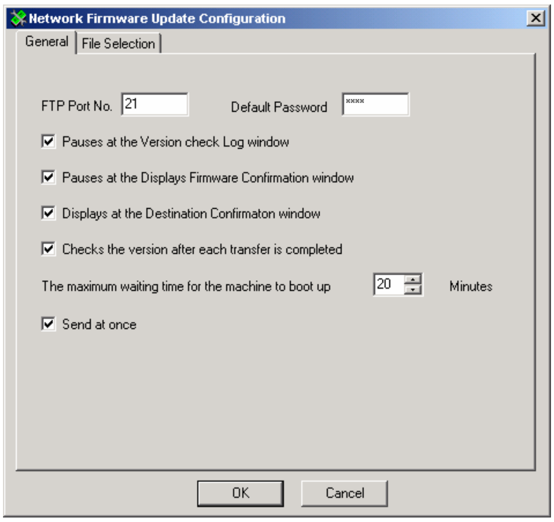
2.2 Setting up the Network Firmware Update Tool

1. Click the **Start** button on the Taskbar, point to **(All) Programs► Panasonic► Panasonic (Network) Firmware Update**, then select **Network Firmware Update Configuration.**

2. The **Configuration** dialog box appears.

   General Tab

   Note: Please only change the settings if necessary.



FTP Port No. 21

Default Password ****

☑ Pauses at the Version check Log window

☑ Pauses at the Displays Firmware Confirmation window

☑ Displays at the Destination Confirmaton window

☑ Checks the version after each transfer is completed

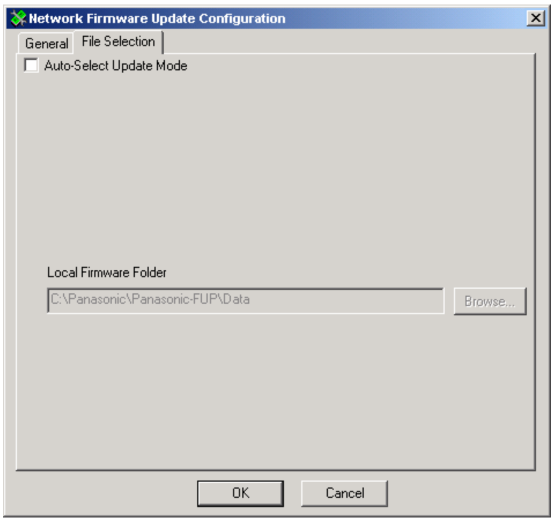
The maximum waiting time for the machine to boot up 20 Minutes

☑ Send at once

   File Selection Tab

   Auto-Select Update Mode
   When you select this mode, the tool acquires the type of firmware and version from the device(s) of the specified address, and updates the device to the latest version from the “Local Firmware Folder”.

   However, this mode cannot change the type of firmware, so you must use the manual mode when changing from the standard firmware to the option firmware.



☐ Auto-Select Update Mode

Local Firmware Folder C:\Panasonic\Panasonic-FUP\Data

3. Click [**OK**] to finish the setup.

2.3 Uninstalling the Network Firmware Update Tool

The **Network Firmware Update Tool** can be uninstalled by using the included uninstall program.

Note: Do not delete the installed program folder from Windows Explorer directly as it may cause registry setting problems.

1. Start Microsoft Windows.

   Log on to the computer/network from an account with Administrator privileges.

2. Click the **Start** button on the Taskbar, point to **(All) Programs► Panasonic► Panasonic Firmware Update**, then select **Uninstall Network Firmware Update Tool**.

3. Follow the instructions on your screen to uninstall (Remove) the program.

4. A confirmation message is displayed when the uninstall is completed.

3. Preparing the Firmware Update

3.1 Preparing the Unit to Accept the Firmware Code

3.1.1 For DX-600 / DX-800 (v1.31 or higher) only

1. If the device password was changed (Remote Password) from the default value (blank = 0000), it is not possible to program the firmware code. In this case, enter the password in advance to the Default Password in the Configuration dialog box, or enter the password at each communication.

2. Make sure the device is not in use (i.e. copying or printing) when performing a firmware update.
   Note: It is recommended to update the firmware at night due to lower activity of the device.

3. Ensure the device is not in Service Mode and that the PC can ping it successfully before proceeding.

3.1.2 For other models

1. If the device password (**Service Mode F7-01** = Key Operator ID Code, or Operation Password) was changed from the default value (0000 or 000), it is not possible to program the firmware code. In this case, enter the password in advance to the Default Password in the Configuration dialog box, or enter the password at each communication.

   For the 3-digit Key Operator Password devices, only the first three digits “000” of the default value are singled out of the 4-digit “0000” value.

2. Make sure the device is not in use (i.e. copying or printing) when performing a firmware update.
   Note: It is recommended to update the firmware at night due to lower activity of the device.

3. Ensure the device is not in Service Mode and that the PC can ping it successfully before proceeding.

3.2 Preparing the Firmware Code

Copy the firmware Code file(s) to the following folder.

C:\Panasonic\Panasonic-FUP\Data

Note: An Archive File (i.e. DP-2310_PU_030327.exe) extracts the Firmware Code Files automatically into the designated folder without needing to paste the file into the folder manually. In this case the file may be downloaded to the desktop or to any other easily accessible location on the hard disk drive.

4. Using the Network Firmware Update Tool

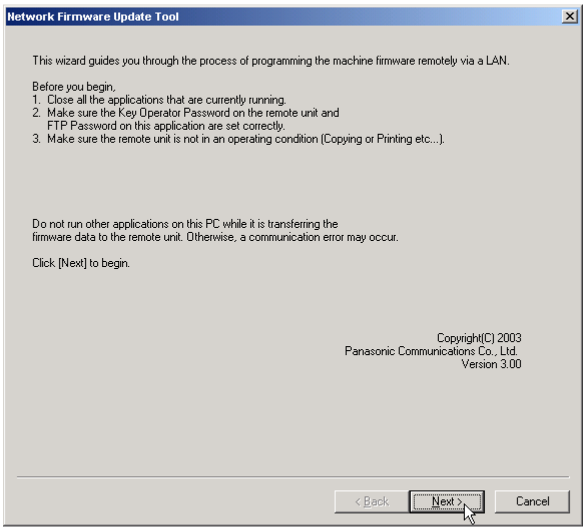
1. Please close all applications that are currently running.

Note: When using the Network Firmware Update Tool you must be logged on with Administrator privileges.

2. From the Windows Desktop, double-click on the **Network Firmware Update** shortcut icon to start the Network Firmware Update Tool.

Note: If a shortcut was not created to the Windows Desktop, click the **Start** button on the Taskbar, point to **(All) Programs▶ Panasonic▶ Panasonic Firmware Update**, then select **Network Firmware Update Tool**.

Click [**Next>**].



This wizard guides you through the process of programming the machine firmware remotely via a LAN.

Before you begin,
1. Close all the applications that are currently running.
2. Make sure the Key Operator Password on the remote unit and FTP Password on this application are set correctly.
3. Make sure the remote unit is not in an operating condition (Copying or Printing etc...).

Do not run other applications on this PC while it is transferring the firmware data to the remote unit. Otherwise, a communication error may occur.

Click [Next] to begin.

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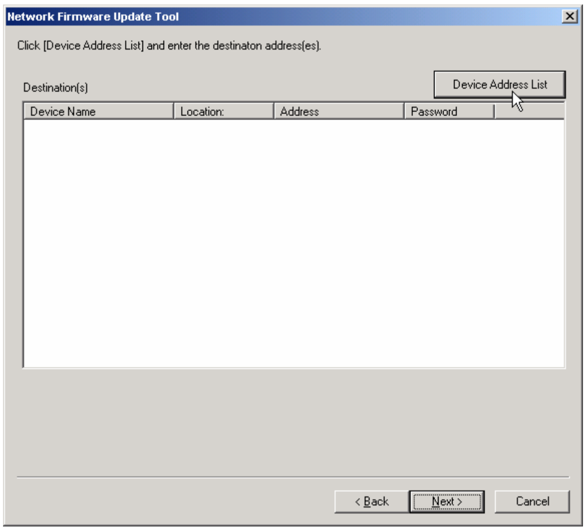
Version 3.00

Note:
1) Make sure the device password (**Service Mode F7-01** = Key Operator ID Code or Operation Password) on the device and the password on this application are set correctly.

Caution:
1) Make sure the device is not in use (i.e. Copying or Printing).
2) Do not run other applications on this PC while it is transferring the firmware data to the device, otherwise a communication error may occur.
3) If using a laptop for the update it is recommended the laptop be connected to a power outlet to prevent battery drain and/or automatic standby mode, which may cause the update to fail.
4) Do not operate nor reset the power of the device while it is updating the firmware code, otherwise the firmware update will fail and the device may not boot up again.
5) If the Network Firmware Update fails and the unit does not reboot automatically for more than 20 minutes, you may need to recover the firmware update again via a Parallel/USB port using the Local Firmware Update Tool, or with the FROM card.

3. Click [**Device Address List**] button.



Click [Device Address List] and enter the destinaton address(es).

Destination(s)

Device Name	Location:	Address	Password

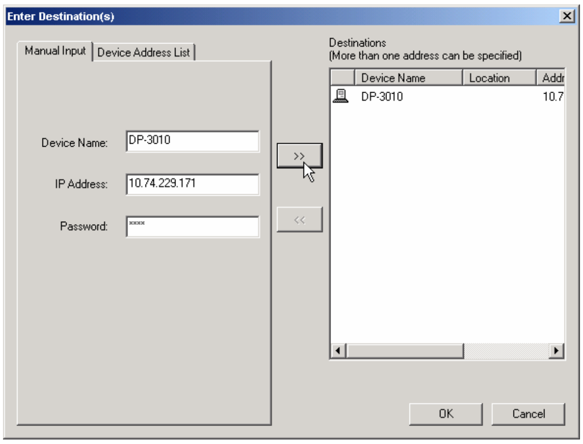
4. Enter the device location on the network by using either **Manual Input** or **Device Address List** methods.

Manual Input Tab

Device Name: Type the name of the device you are updating (i.e. DP-3010)
IP Address: Type the IP Address of the device you are updating (this information can generally be located through the Key Operator or Service Modes)
Password: Enter the device password

Note: If the default password is used on the device there is no need to enter it in this box

When compete select the [**>>**] button to add the destination to the list.


Enter Destination(s)
Manual Input
Device Address List
>>
<<
OK
Cancel

Device Name: DP-3010
IP Address: 10.74.229.171
Password: ****

Destinations
(More than one address can be specified)

Device Name	Location	Addr
DP-3010		10.7

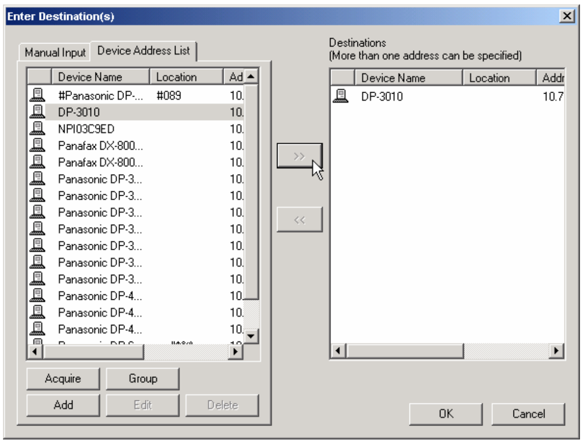
Device Address List Tab

Locate and select the device you would like to update on the Device Address List.

Select the [**>>**] button to add the destination to the list.

Note: Multiple destinations can be added to update more than one device.

Click [**OK**].


Enter Destination(s)
Manual Input
Device Address List
>>
<<
Acquire
Group
Add
Edit
Delete
OK
Cancel

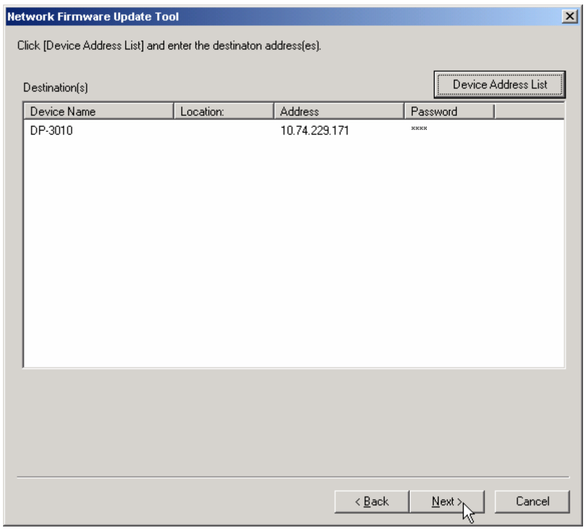
Device Name	Location	Ad
#Panasonic DP-...	#089	10.
DP-3010		10.
NPI03C9ED		10.
Panafax DX-800...		10.
Panafax DX-800...		10.
Panasonic DP-3...		10.
Panasonic DP-3...		10.
Panasonic DP-3...		10.
Panasonic DP-3...		10.
Panasonic DP-3...		10.
Panasonic DP-3...		10.
Panasonic DP-3...		10.
Panasonic DP-4...		10.
Panasonic DP-4...		10.
Panasonic DP-4...		10.

Destinations
(More than one address can be specified)

Device Name	Location	Addr
DP-3010		10.7

5. Confirm the device information and destination(s).

Click [**Next>**].


Network Firmware Update Tool
Device Address List
< Back
Next >
Cancel

Click [Device Address List] and enter the destinaton address(es).

Destination(s)

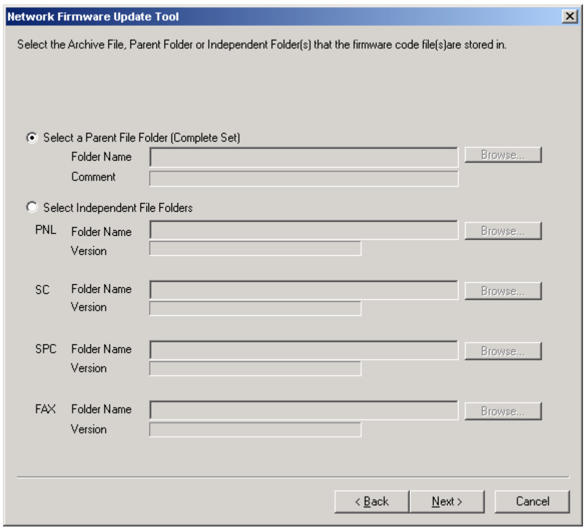
Device Name	Location:	Address	Password
DP-3010		10.74.229.171	****

6. Specify the Firmware Code File using one of the following methods:

6.1 Select a Parent File Folder (Complete Set)
If the archive file is already extracted into the local **Panasonic-FUP\Data** folder, you can select the Parent File Folder directly from here. It is packaged as a set when the update of multiple firmware code files is necessary.

or

6.2 Select Independent File Folders
If the archive file is already extracted into the local **Panasonic-FUP\Data** folder, you can select independent file folders from here to upload firmware for separate modules in the device.


Network Firmware Update Tool
Browse...
< Back
Next >
Cancel

Select the Archive File, Parent Folder or Independent Folder(s) that the firmware code file(s)are stored in.

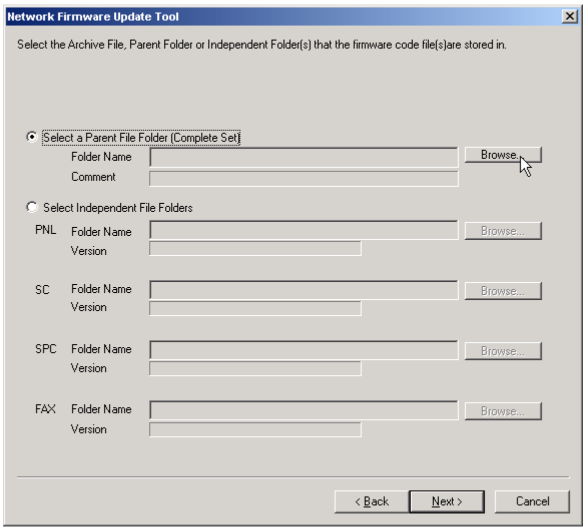
● Select a Parent File Folder (Complete Set)
Folder Name
Comment

○ Select Independent File Folders
PNL Folder Name
Version
SC Folder Name
Version
SPC Folder Name
Version
FAX Folder Name
Version

Note: Files are chosen automatically in the automatic mode, so the screen of step 6 is not shown.

6.1a **Select a Parent File Folder (Complete Set)**

Select "**Select a Parent File Folder (Complete Set)**", and click [**Browse...**].

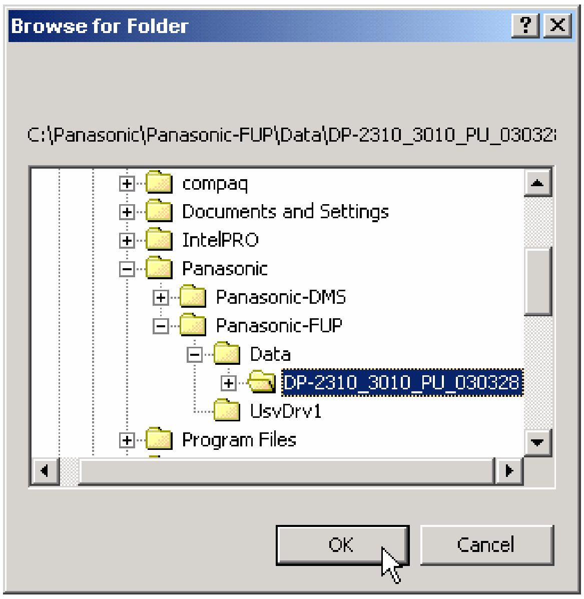

Network Firmware Update Tool
Browse...
< Back
Next >
Cancel

Select the Archive File, Parent Folder or Independent Folder(s) that the firmware code file(s)are stored in.

● Select a Parent File Folder (Complete Set)
Folder Name
Comment

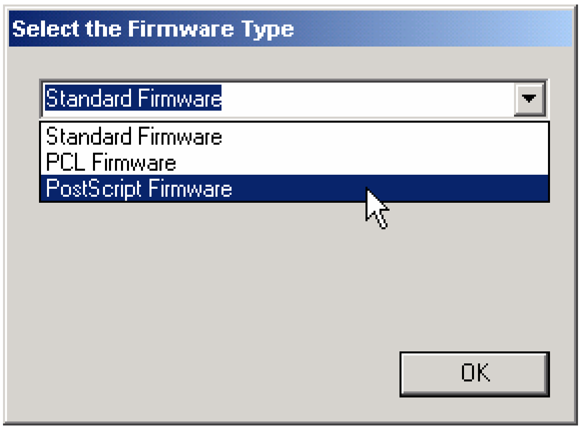
○ Select Independent File Folders
PNL Folder Name
Version
SC Folder Name
Version
SPC Folder Name
Version
FAX Folder Name
Version

6.1b Select the name of Parent File Folder (For Example: DP-2310_3010_PU_030228), and Click [**OK**].


Browse for Folder
?
compaq
Documents and Settings
IntelPRO
Panasonic
Panasonic-DMS
Panasonic-FUP
Data
DP-2310_3010_PU_030328
UsvDrv1
Program Files
OK
Cancel

C:\Panasonic\Panasonic-FUP\Data\DP-2310_3010_PU_03032

6.1c Select the Firmware Type based on the options installed in the machine, and click [**OK**].



Select the Firmware Type

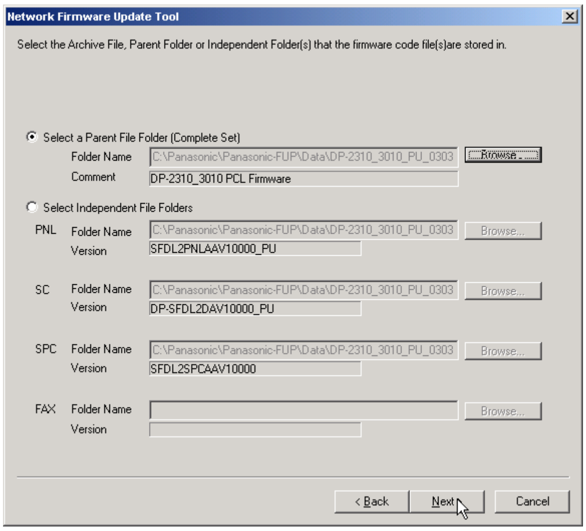
Standard Firmware

Standard Firmware
PCL Firmware
PostScript Firmware
OK

6.1d Firmware Code File selection is completed.

Click [**Next>**].

Continue to Section 7.



Network Firmware Update Tool

Select the Archive File, Parent Folder or Independent Folder(s) that the firmware code file(s)are stored in.

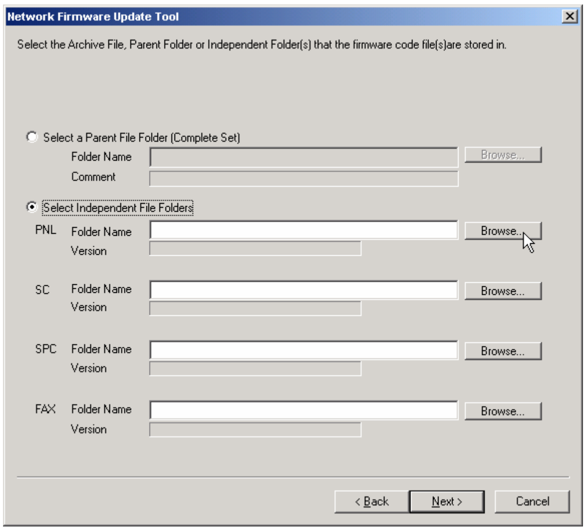
● Select a Parent File Folder (Complete Set)
Folder Name: C:\Panasonic\Panasonic-FUP\Data\DP-2310_3010_PU_0303
Comment: DP-2310_3010 PCL Firmware

○ Select Independent File Folders
PNL Folder Name: C:\Panasonic\Panasonic-FUP\Data\DP-2310_3010_PU_0303
Version: SFDL2PNLAAV10000_PU
SC Folder Name: C:\Panasonic\Panasonic-FUP\Data\DP-2310_3010_PU_0303
Version: DP-SFDL2DAV10000_PU
SPC Folder Name: C:\Panasonic\Panasonic-FUP\Data\DP-2310_3010_PU_0303
Version: SFDL2SPCAAV10000
FAX Folder Name:
Version:

Browse...
Browse...
Browse...
Browse...
Browse...
< Back
Next
Cancel

6.2a Select Independent File Folders

Select “Select Independent File Folders” and click [**Browse...**] for **PNL**.



Network Firmware Update Tool

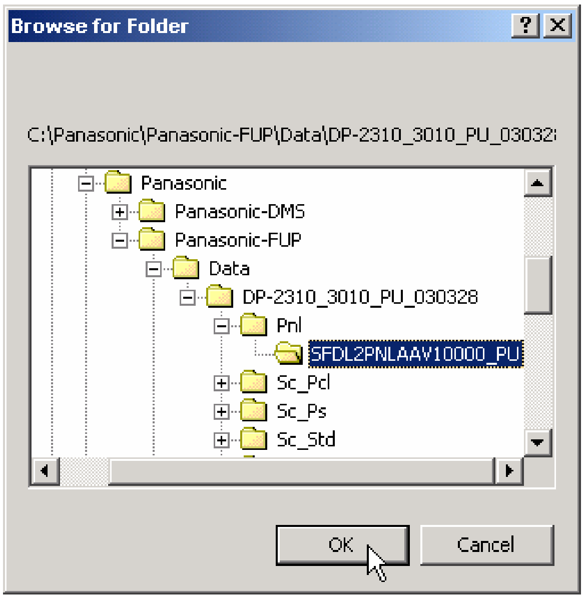
Select the Archive File, Parent Folder or Independent Folder(s) that the firmware code file(s)are stored in.

○ Select a Parent File Folder (Complete Set)
Folder Name:
Comment:

● Select Independent File Folders
PNL Folder Name:
Version:
SC Folder Name:
Version:
SPC Folder Name:
Version:
FAX Folder Name:
Version:

Browse...
Browse...
Browse...
Browse...
Browse...
< Back
Next >
Cancel

6.2b Select the Firmware Code File Folder for PNL (For Example: SFDL2PNLAAV100000_PU.BIN) and click [**OK**].

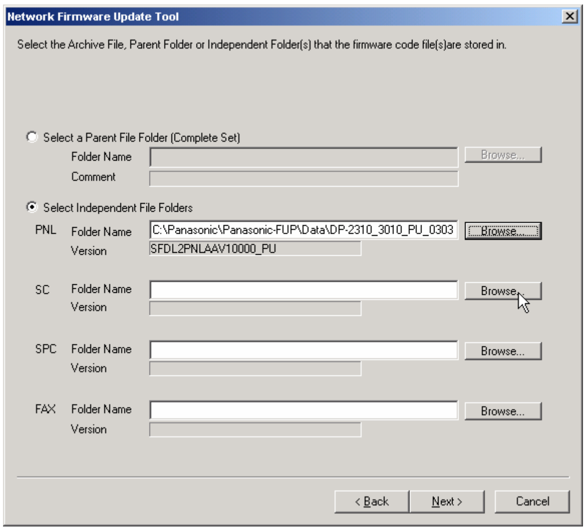


Browse for Folder

C:\Panasonic\Panasonic-FUP\Data\DP-2310_3010_PU_03032

?
Panasonic
Panasonic-DMS
Panasonic-FUP
Data
DP-2310_3010_PU_030328
Pnl
SFDL2PNLAAV10000_PU
Sc_Pcl
Sc_Ps
Sc_Std
OK
Cancel

6.2c Repeat steps for other Firmware Code File Folders if applicable, and click [**OK**].



Network Firmware Update Tool

Select the Archive File, Parent Folder or Independent Folder(s) that the firmware code file(s)are stored in.

○ Select a Parent File Folder (Complete Set)
Folder Name
Comment

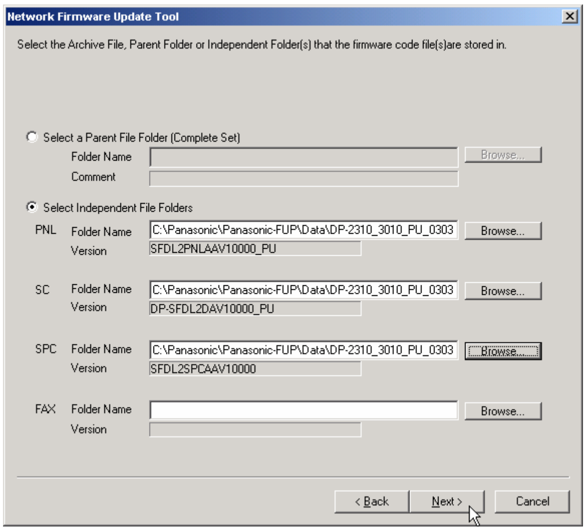
● Select Independent File Folders
PNL Folder Name C:\Panasonic\Panasonic-FUP\Data\DP-2310_3010_PU_0303
Version SFDL2PNLAAV10000_PU
SC Folder Name
Version
SPC Folder Name
Version
FAX Folder Name
Version

Browse...
Browse...
Browse...
Browse...
Browse...
< Back
Next >
Cancel

6.2d Firmware Code File selection is completed.

Click [**Next>**].

Continue Below.



Network Firmware Update Tool

Select the Archive File, Parent Folder or Independent Folder(s) that the firmware code file(s)are stored in.

○ Select a Parent File Folder (Complete Set)
Folder Name
Comment

● Select Independent File Folders
PNL Folder Name C:\Panasonic\Panasonic-FUP\Data\DP-2310_3010_PU_0303
Version SFDL2PNLAAV10000_PU
SC Folder Name C:\Panasonic\Panasonic-FUP\Data\DP-2310_3010_PU_0303
Version DP-SFDL2DAV10000_PU
SPC Folder Name C:\Panasonic\Panasonic-FUP\Data\DP-2310_3010_PU_0303
Version SFDL2SPCAAV10000
FAX Folder Name
Version

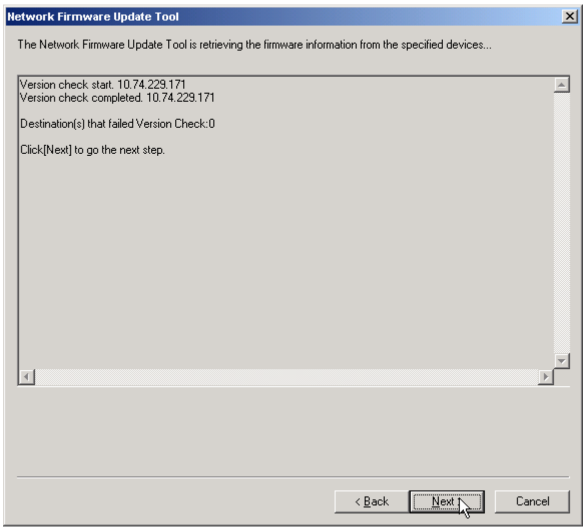
Browse...
Browse...
Browse...
Browse...
Browse...
< Back
Next >
Cancel

7. The version check for the specified devices starts automatically.

If 0 destinations fail the version check go to the next step.

Click [**Next>**].

Note: If a timeout error occurs, please confirm that the device is not currently in Service Mode and also that the Device's IP address pings successfully. You may need to go back and change some of the settings within the tool before proceeding with the update.



Network Firmware Update Tool

The Network Firmware Update Tool is retrieving the firmware information from the specified devices...

Version check start. 10.74.229.171
Version check completed. 10.74.229.171

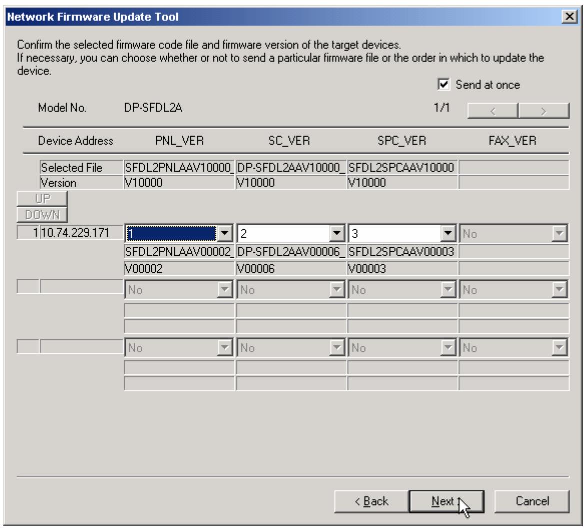
Destination(s) that failed Version Check:0

Click[Next] to go the next step.

8. Verify that the information you want to update is correct before proceeding.

Then click [**Next>**].

Note: If "Send at once" is checked, all firmware will be sent at once, and then erase, write and reboot are performed for the entire package.
If "Send at once" is unchecked, each firmware (SC, PNL, SPC, etc.) is transmitted separately, and each time the unit erases, writes and reboots in the normal mode for each independent update.
This "Send at once", function cannot be used if the model is DP-6010 / 4510 / 3510, firmware type is PCL or PS, and the unit SC version is V1.xxxx.



Network Firmware Update Tool

Confirm the selected firmware code file and firmware version of the target devices.
If necessary, you can choose whether or not to send a particular firmware file or the order in which to update the device.

☑ Send at once

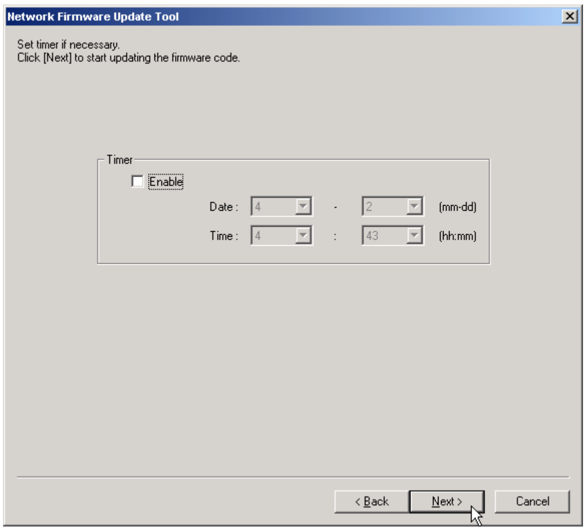
Model No. DP-SFDL2A 1/1

Device Address	PNL_VER	SC_VER	SPC_VER	FAX_VER
Selected File	SFDL2PNLAAV10000_	DP-SFDL2AAV10000_	SFDL2SPCAAV10000	
Version	V10000	V10000	V10000	
1 10.74.229.171	1	2	3	No
	SFDL2PNLAAV00002_	DP-SFDL2AAV00006_	SFDL2SPCAAV00003	
	V00002	V00006	V00003	
	No	No	No	No
	No	No	No	No

9. Confirm the destination device(s) again.

Set timer communication if necessary, otherwise leave unchecked.

Then click [**Next>**].



Network Firmware Update Tool

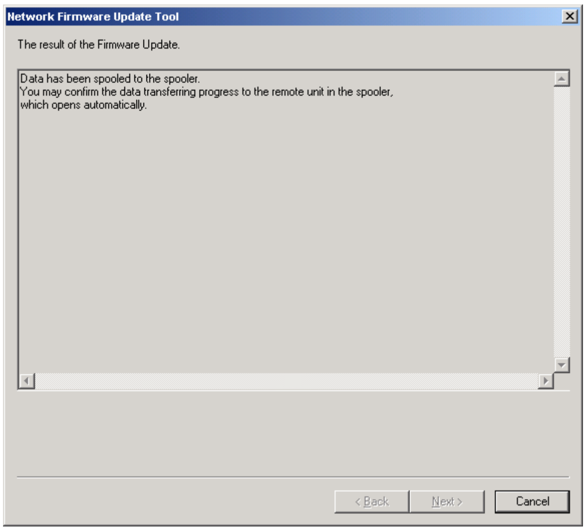
Set timer if necessary.
Click [Next] to start updating the firmware code.

Timer
☐ Enable
Date : 4 - 2 (mm-dd)
Time : 4 : 43 (hh:mm)

10. Data is then transferred to the Spooler, and the update is started.

The Spooler screen appears automatically showing the progress of the data transfer.

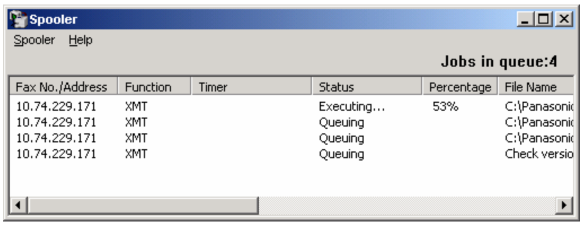
The spooler will take time to open depending on the number of addresses to update.



Network Firmware Update Tool

The result of the Firmware Update.

Data has been spooled to the spooler.
You may confirm the data transferring progress to the remote unit in the spooler,
which opens automatically.



Spooler

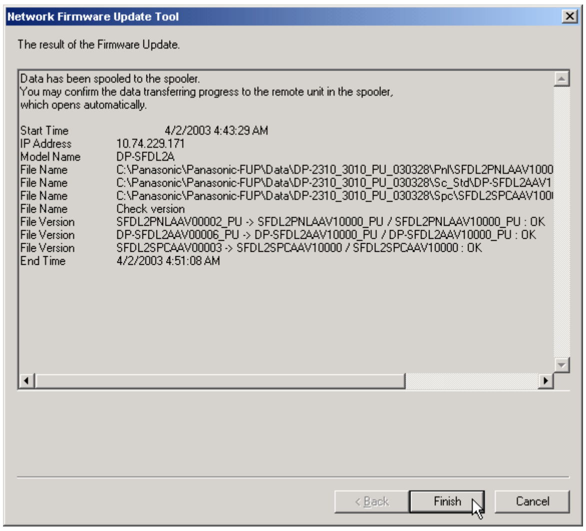
Jobs in queue:4

Fax No./Address	Function	Timer	Status	Percentage	File Name
10.74.229.171	XMT		Executing...	53%	C:\Panasonic
10.74.229.171	XMT		Queuing		C:\Panasonic
10.74.229.171	XMT		Queuing		C:\Panasonic
10.74.229.171	XMT		Queuing		Check versio

11. When the transfers are completed, all jobs in the spooler disappear, and the communication log is displayed.

After the firmware code is successfully programmed to the Firmware Flash Memory in the device, the device will shut down and reboot automatically.

Click [**Finish**].



Network Firmware Update Tool

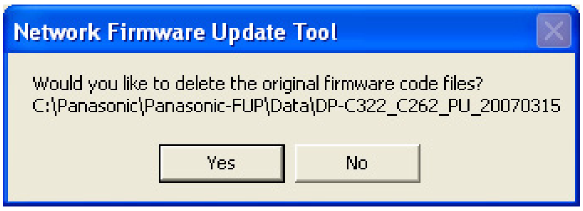
The result of the Firmware Update.

```
Data has been spooled to the spooler.
You may confirm the data transferring progress to the remote unit in the spooler,
which opens automatically.

Start Time            4/2/2003 4:43:29 AM
IP Address        10.74.229.171
Model Name        DP-SFDL2A
File Name         C:\Panasonic\Panasonic-FUP\Data\DP-2310_3010_PU_030328\Pnl\SFDL2PNLAAV1000
File Name         C:\Panasonic\Panasonic-FUP\Data\DP-2310_3010_PU_030328\Sc_Std\DP-SFDL2AAV1
File Name         C:\Panasonic\Panasonic-FUP\Data\DP-2310_3010_PU_030328\Spc\SFDL2SPCAAV100
File Name         Check version
File Version      SFDL2PNLAAV00002_PU -> SFDL2PNLAAV10000_PU / SFDL2PNLAAV10000_PU : OK
File Version      DP-SFDL2AAV00006_PU -> DP-SFDL2AAV10000_PU / DP-SFDL2AAV10000_PU : OK
File Version      SFDL2SPCAAV00003 -> SFDL2SPCAAV10000 / SFDL2SPCAAV10000 : OK
End Time          4/2/2003 4:51:08 AM
```

12. A Firmware Deletion confirmation screen will appear.

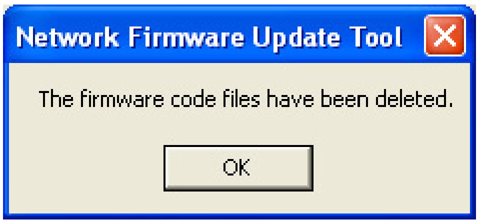
Click [**Yes**] to delete the firmware code files that you used for the update, or click [**No**] to keep the firmware code files in your PC for future use.



Network Firmware Update Tool

Would you like to delete the original firmware code files?
C:\Panasonic\Panasonic-FUP\Data\DP-C322_C262_PU_20070315

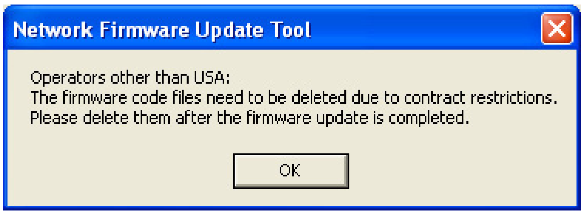
13. Confirm the message in the text box and click [**OK**] to close the tool.



The firmware code files have been deleted.

Network Firmware Update Tool
OK

or



Operators other than USA:
The firmware code files need to be deleted due to contract restrictions.
Please delete them after the firmware update is completed.

Network Firmware Update Tool
OK

Panasonic

Software

Operating Instructions

Local Firmware Update Tool

for Service Technicians

Version 3

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13th Edition : 2004 August 3
14th Edition : 2004 August 20
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The contents of this Operating Instructions are subject to change without notice.

1. General

The Local Firmware Update Tool (Parallel/USB) enables a PC to program the Firmware Code directly to the memory of the Panasonic Fax/MFP machine. The installation and operation are very similar to the installation of a USB or Parallel printer interface.

1.1 Supported Operating Systems

This application software operation has been confirmed under the following Operating Systems

- Windows® 2000
- Windows® XP
- Windows Server® 2003
- Windows Vista®

Note: 64bit version is not supported.

1.2 Supported Panasonic Fax/MFP Models

Please refer to the service manual of each model to determine compatibility.

2. Installation

2.1 Installing the Hardware Port on the Panasonic Fax/MFP Machine

1 Depending on the model, either a Parallel Port or a USB Port is required in the machine.
If the machine is not already equipped with one of these ports please install an optional Parallel Port/USB Port Assembly into the supporting Panasonic Fax/MFP models by following the appropriate option installation instructions for that model.

2 Prepare the Parallel cable or USB cable for connecting the Panasonic Fax/MFP and your PC.

Important: For the USB port models, do not connect the USB cable yet.

2.2 Installing the Local Firmware Update Tool

1 Start Microsoft Windows.

Log on to the computer from an account with Administrator privileges.

Important: For the USB port models, do not connect the USB cable yet.

2 Locate and Run the **Setup(.exe)** program in the **Firmup** folder contained in the software setup disk or folder.

3 Follow the instructions on your screen to install the program.

Note:
The "**Digital Signature Not Found**" or "**Software Installation**" window will be displayed during the installation and indicate "Unknown software package" or "not passed Windows Logo testing", please click [**YES**] or [**Continue Anyway**] button to continue the installation.

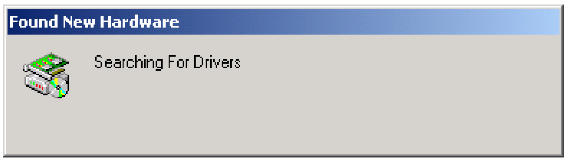
4 A confirmation message is displayed when the installation is completed.
When prompted to do so, allow the program to restart your PC.

2.3 Installing USB Firmware Update Driver (For the USB Port Model Only)

1 After installation of the Local Firmware Update Tool, if you need to install the USB Firmware Update Driver, please first set the unit to **"Update from USB/* IN PROGRESS *"** in the **Service Mode**, and then connect the USB Cable. The required Driver will then be installed automatically.

Note:
For instructions of how to enter the Service Mode, refer to your device's Service Manual.

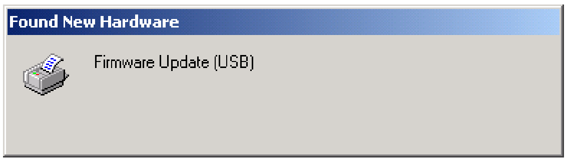
2 Searching...



Found New Hardware

Searching For Drivers

Installing driver...



Found New Hardware

Firmware Update (USB)

3 When the install screen disappears, the installation of the Firmware Update (USB) Driver is completed.

Note:

1. The installation screens will vary depending on the Operating System.
2. The "**Digital Signature Not Found**" or "**Software Installation**" window will be displayed during the installation and indicate "Unknown software package" or "not passed Windows Logo testing", please click [**YES**] or [**Continue Anyway**] button to continue the installation.
3. If you are asked for the **inf** file location, please specify the following folder. **C:\Panasonic\Panasonic-FUP\UsbDrv1**
4. If you are asked for the **inf** file selection, please chose the larger version of the file.
5. After the USB Firmware Update Driver is installed, and if you are not updating the machine's firmware at this time, turn the Power Switch OFF and ON again to return your machine to the Standby mode.

2.4 Uninstalling the Local Firmware Update Tool

The Local **Firmware Update Tool** can be uninstalled by using it's Uninstall program.

Note: Do not delete the installed program folder from Windows Explorer directly, due to possible registry setting problems.

1. Start Microsoft Windows.

   Log on to the computer/network from an account with Administrator privileges.
2. Click the **Start** button on the Taskbar, point to **(All) Programs ▸ Panasonic ▸ Firmware Update** then select **Uninstall Local Firmware Update Tool**.
3. Follow the instructions on your screen to uninstall (Remove) the program.
4. The completion message is displayed when the uninstall is completed.

Note:

The Firmware Update drivers are not deleted by the Uninstaller. If you wish to delete the Firmware Update drivers, please carry out in the following procedure.

1) On the **Printers and Faxes** selection of the **Control Panel**, choose the Firmware Update driver and select "Delete" from the right click menu to delete the driver.
2) Choose "**Server Properties**" from a right-click menu without choosing any drivers, and remove the "Firmware Update" driver on the **Driver** tab.
3) If you want to install the USB Firmware Update driver again, please carry it out after deleting a USB port by running **FupUninst.exe** which can be found in the **Cleanup_UsbPort** folder of the software setup disk or folder.

3. Preparing the Firmware Update

3.1 Preparing the Unit to Accept the Firmware Code

Please refer to the Service Manual for instructions to set the unit to Firmware Update Mode (Service Mode).

3.2 Preparing the Firmware Code

Copy the firmware Code file(s) to the following folder:

C:\Panasonic\Panasonic-FUP\Data

Note: An Archive File (i.e. DP-2310_PU_030327.exe) extracts the Firmware Code Files automatically into the designated folder without needing to paste the file into the folder manually. In this case the file may be downloaded to the desktop or to any other easily accessible location on the hard disk drive.

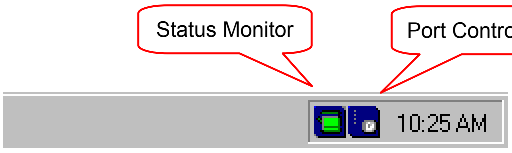
4. Using the Local Firmware Update Tool

1 Set the machine to the Firmware Update Mode and then connect the unit and PC with a Parallel cable or USB cable depending on machine option.

Note: For the USB Port Models, the Plug & Play of the Printer mode is activated when the USB cable is connected without the unit set in the USB Firmware Update Mode. If this happens, please click the [Cancel] button for the Plug and Play Driver installation.

2 Please close the all applications that are currently running.
Also ensure that the **Status Monitor** and/or **Port Controller** are **closed**. If they are running, right click on the icons in the system tray and select Exit/End.

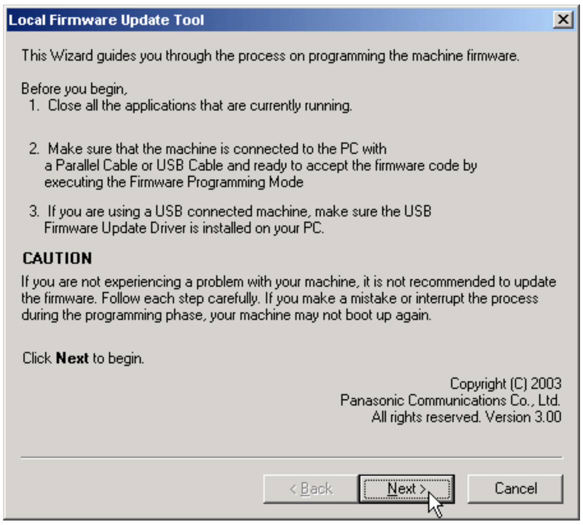
Note: For Windows 2000/XP Administrator privileges are required.



3 From the Windows Desktop, double-click on the **Local Firmware Update Tool** shortcut icon to start the Panasonic Firmware Programming Wizard.

Note: If a shortcut was not created to the Windows Desktop at the time of installation, click the **Start** button on the Taskbar, point to **(All) Programs ► Panasonic ► Panasonic Firmware Update**, then select **Local Firmware Update Tool**.

Click [**Next>**].



This Wizard guides you through the process on programming the machine firmware.

Before you begin,
1. Close all the applications that are currently running.

2. Make sure that the machine is connected to the PC with a Parallel Cable or USB Cable and ready to accept the firmware code by executing the Firmware Programming Mode

3. If you are using a USB connected machine, make sure the USB Firmware Update Driver is installed on your PC.

CAUTION
If you are not experiencing a problem with your machine, it is not recommended to update the firmware. Follow each step carefully. If you make a mistake or interrupt the process during the programming phase, your machine may not boot up again.

Click **Next** to begin.

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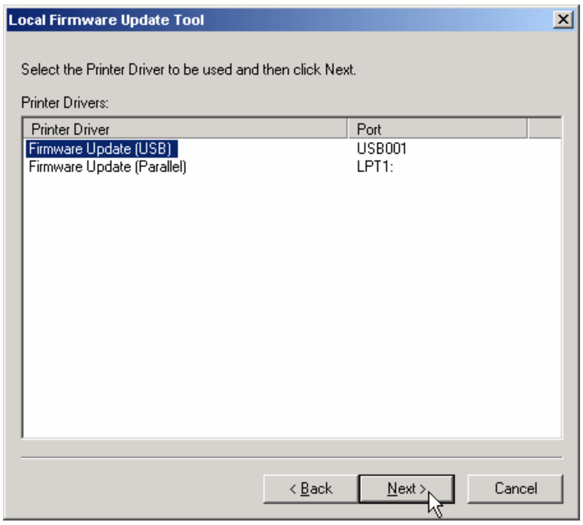
All rights reserved. Version 3.00

4 Select the Firmware Update Driver USB or Parallel depending on how the machine is connected to the PC.

Click [**Next>**].



Select the Printer Driver to be used and then click Next.

Printer Drivers:

Printer Driver	Port
Firmware Update (USB)	USB001
Firmware Update (Parallel)	LPT1:

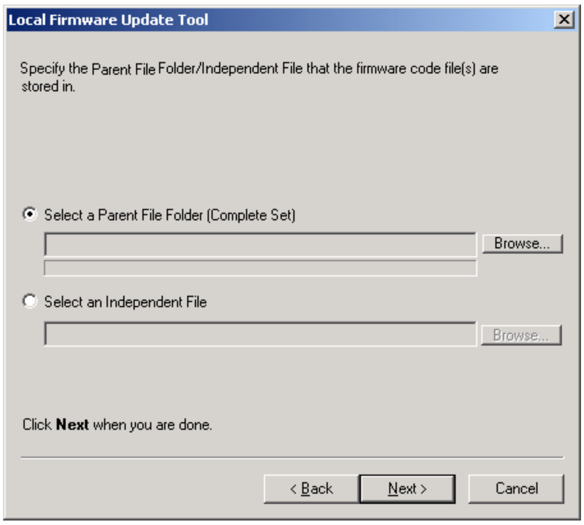
Note: The “Firmware Update Driver (USB)” is only displayed if you installed it with the unit as Plug and Play.

5 Specify the Firmware Code File by the following methods.

Select a Parent File Folder (Complete Set)
--> Step 5.1
If the archive file is already extracted into the local **\Data** folder, you can select the Parent File Folder directly here.
It is chosen as a set when the update of multiple firmware code files is necessary.

or

Select an Independent File
--> Step 5.2
If the archive file is already extracted into the local **\Data** folder, you can select an independent file here.
When updating multiple firmware files, you must repeat the file selection operation.



Specify the Parent File Folder/Independent File that the firmware code file(s) are stored in.

● Select a Parent File Folder (Complete Set)

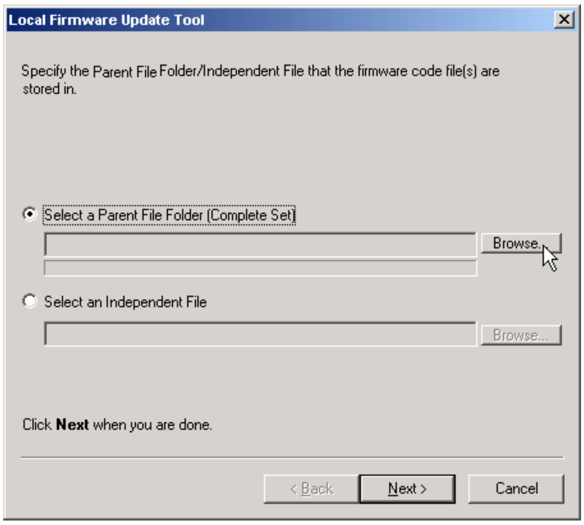
○ Select an Independent File

Click **Next** when you are done.

Local Firmware Update Tool
Browse...
Browse...
< Back
Next >
Cancel

5.1 **Select a Parent File Folder (Complete Set)**

5.1a Select "Select a Parent File Folder (Complete Set)" and click [**Browse...**] button.



Specify the Parent File Folder/Independent File that the firmware code file(s) are stored in.

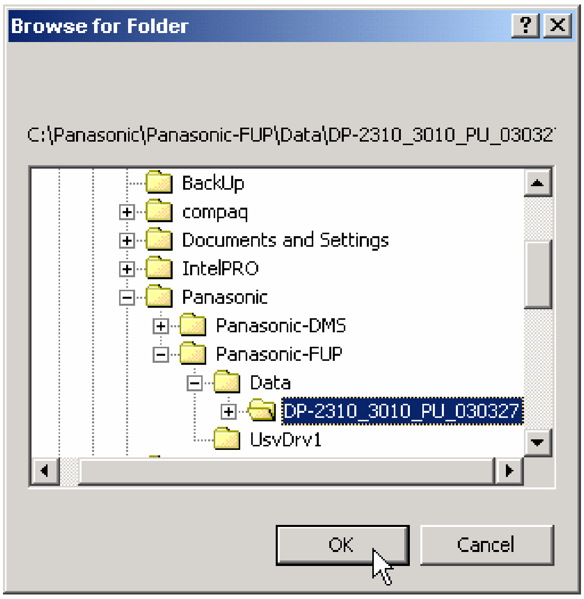
● Select a Parent File Folder (Complete Set)

○ Select an Independent File

Click **Next** when you are done.

Local Firmware Update Tool
Browse...
Browse...
< Back
Next >
Cancel

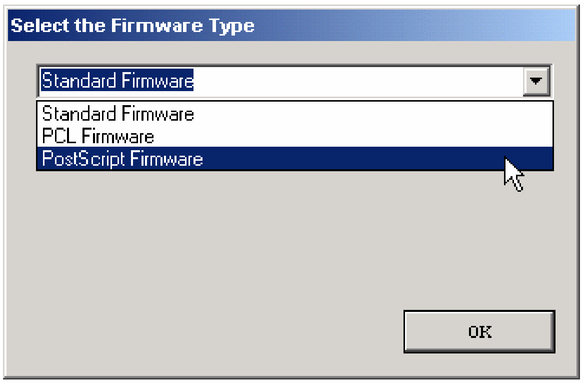
5.1b Select the Parent File Folder (For Example: DP-2310_3010_PU_030327) and Click [**OK**].



C:\Panasonic\Panasonic-FUP\Data\DP-2310_3010_PU_03032

Browse for Folder
BackUp
compaq
Documents and Settings
IntelPRO
Panasonic
Panasonic-DMS
Panasonic-FUP
Data
DP-2310_3010_PU_030327
UsvDrv1
OK
Cancel

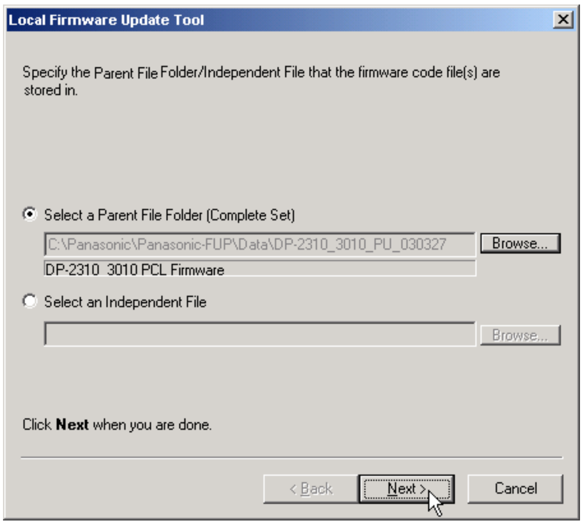
5.1c Select the Firmware Type and click [**OK**].


Select the Firmware Type
Standard Firmware
Standard Firmware
PCL Firmware
PostScript Firmware
OK

5.1d Firmware Code File selection is completed.

Click [**Next >**]

Please proceed to Step 6.


Local Firmware Update Tool
Browse...
Browse...
< Back
Next >
Cancel

Specify the Parent File Folder/Independent File that the firmware code file(s) are stored in.

● Select a Parent File Folder (Complete Set)

C:\Panasonic\Panasonic-FUP\Data\DP-2310_3010_PU_030327

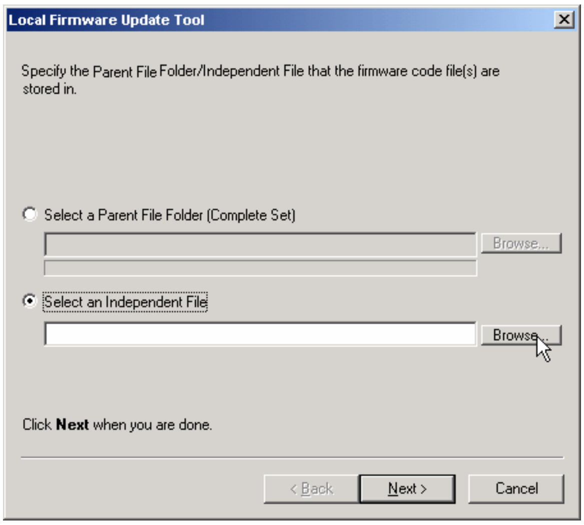
DP-2310 3010 PCL Firmware

○ Select an Independent File

Click **Next** when you are done.

5.2 Select an Independent File

5.2a Select "**Select an Independent File**" and click [**Browse...**] button.


Local Firmware Update Tool
Browse...
Browse...
< Back
Next >
Cancel

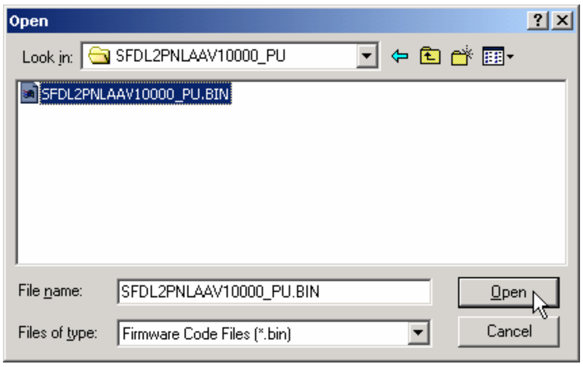
Specify the Parent File Folder/Independent File that the firmware code file(s) are stored in.

○ Select a Parent File Folder (Complete Set)

● Select an Independent File

Click **Next** when you are done.

5.2b Select the Firmware Code File (For example SFDL2PNLAAV100000_PU.BIN) and click [**Open**].


Open
Open
Cancel

Look in: SFDL2PNLAAV10000_PU

SFDL2PNLAAV10000_PU.BIN

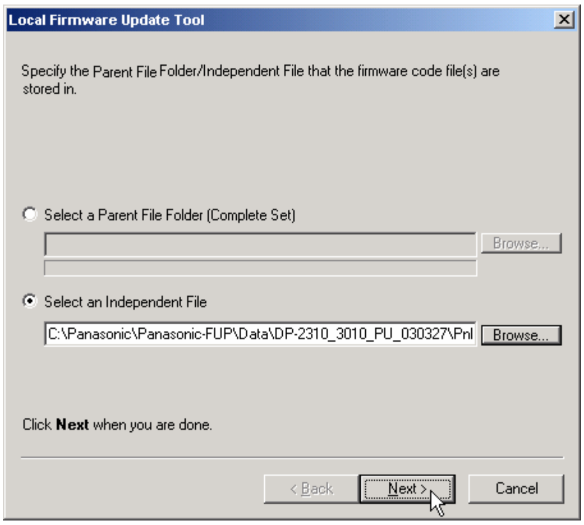
File name: SFDL2PNLAAV10000_PU.BIN

Files of type: Firmware Code Files (*.bin)

5.2c Firmware Code File selection is completed.

Click [**Next>**].

Continue below.


Local Firmware Update Tool
Browse...
Browse...
< Back
Next >
Cancel

Specify the Parent File Folder/Independent File that the firmware code file(s) are stored in.

○ Select a Parent File Folder (Complete Set)

● Select an Independent File

C:\Panasonic\Panasonic-FUP\Data\DP-2310_3010_PU_030327\Pnl

Click **Next** when you are done.

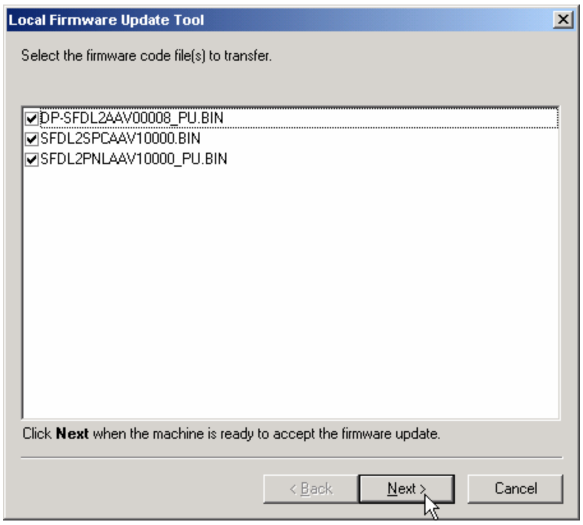
6 The selected Firmware Code File(s) are indicated. Uncheck the box if you do not need to transfer a file.

On the unit side:

Set the unit to the Firmware Update Mode.

Before proceeding ensure that a USB cable or a Parallel cable are connected from the unit to the PC.

Click [**Next>**]



Local Firmware Update Tool

Select the firmware code file(s) to transfer.

☑ DP-SFDL2AAV00008_PU.BIN
☑ SFDL2SPCAAV10000.BIN
☑ SFDL2PNLAAV10000_PU.BIN

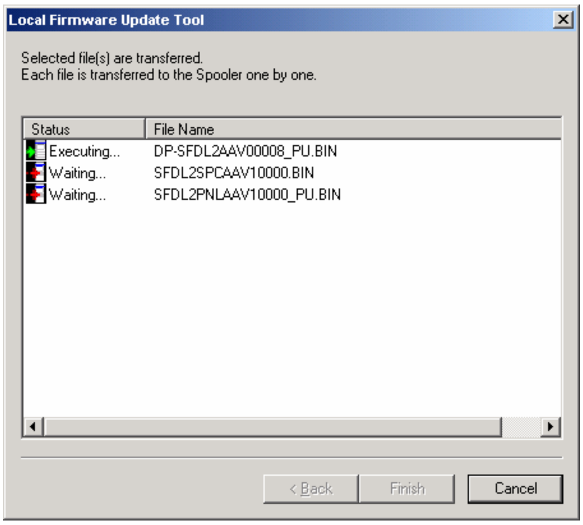
Click **Next** when the machine is ready to accept the firmware update.

7 The Firmware Code File starts transferring.

When there is more than one file to be updated, the operation will be the following:

For **USB connected** unit:
they are transferred in turn automatically if the unit is ready to receive the next firmware code file.

Note: If you are updating the DP-2310/3010, the sending of sequential multiple files to the unit isn't done automatically. The "Waiting..." display on the PC will not advance to "Executing..." until you set the unit back to USB Firmware Update on the machine to start receiving the next file. See **Unit information of the Firmware Update Mode** on the next page.

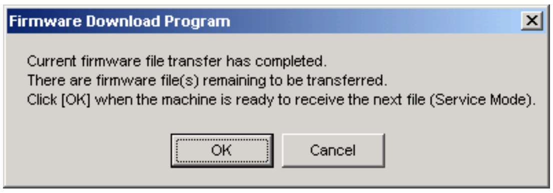


Local Firmware Update Tool

Selected file(s) are transferred.
Each file is transferred to the Spooler one by one.

Status	File Name
Executing...	DP-SFDL2AAV00008_PU.BIN
Waiting...	SFDL2SPCAAV10000.BIN
Waiting...	SFDL2PNLAAV10000_PU.BIN

For **Parallel connected** unit:
the confirmation screen is displayed when the current firmware code file transfer is finished and there are remaining firmware code files. Click [**OK**] when the machine is ready to receive the next file.



Firmware Download Program

Current firmware file transfer has completed.
There are firmware file(s) remaining to be transferred.
Click [OK] when the machine is ready to receive the next file (Service Mode).

Unit information of the Firmware Update Mode:

For **USB Connected Unit (DP-2310/3010 only)**:

Every time the machine finishes receiving a firmware code file **the unit deletes and rewrites the firmware code and will return to Service Mode again. Set the unit back to USB Firmware Update after the machine returns to Service Mode and continue the firmware update.**
When the last firmware code file (PNL) is received, the unit will re-boot automatically and return to standby. The unit doesn't re-boot automatically when you select an independent file and the PNL firmware wasn't transferred. Cycle the power Off-On and reset the unit if the firmware code file transfer is finished and the unit has returned to the Service Mode.

For **USB Connected Unit (Other models)**:

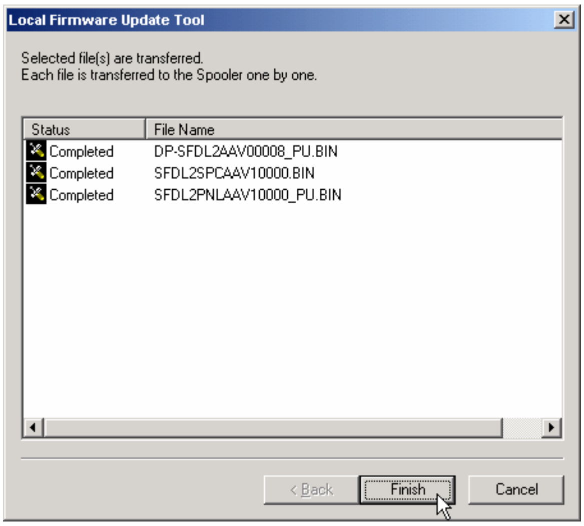
Every time the machine finishes receiving a firmware code file, **the unit deletes and rewrites the firmware code and will return to USB Firmware Update and continue the firmware update automatically.**
When the last firmware code file (**AutoBoot**) is received the unit will re-boot automatically and return to standby. The unit doesn't boot automatically when you select an independent file. (The display returns to “Update in Progress”) Cycle the power Off-On to reset the unit if the firmware code file transfer is finished and the display shows Completed.

For **Parallel Connected** Unit:

Every time the machine finishes receiving a firmware code file the unit deletes, rewrites the firmware code and then re-boots. Set the unit back to Parallel Firmware Update in Service Mode after boot up to continue the firmware update.

8 When the transfers of all the firmware files are finished, click [**Finish**] to close the tool.

Note: For USB Connected Unit only.
When the unit returns to standby, Plug and Play of the printer will popup.
Click [**Cancel**] to close the Printer Plug and Play window.

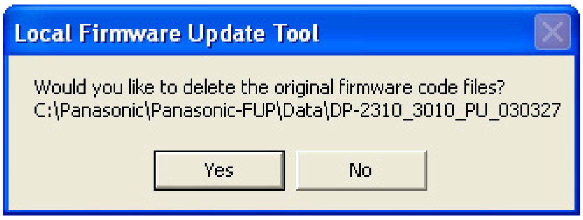


Selected file(s) are transferred.
Each file is transferred to the Spooler one by one.

Status	File Name
Completed	DP-SFDL2AAV00008_PU.BIN
Completed	SFDL2SPCAAV10000.BIN
Completed	SFDL2PNLAAV10000_PU.BIN

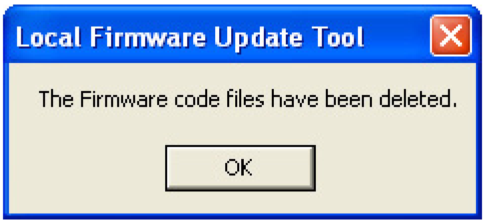
9 A Firmware Deletion confirmation screen will appear.

Click [**Yes**] to delete the firmware code files that you used for the update, or click [**No**] to keep the firmware code files in your PC for future use.



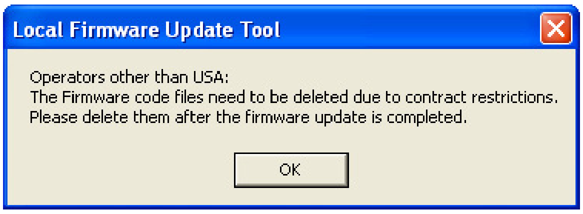
Would you like to delete the original firmware code files?
C:\Panasonic\Panasonic-FUP\Data\DP-2310_3010_PU_030327

10 Confirm the message in the text box and click [**OK**] to close the tool.


Local Firmware Update Tool
OK

The Firmware code files have been deleted.

or


Local Firmware Update Tool
OK

Operators other than USA:
The Firmware code files need to be deleted due to contract restrictions.
Please delete them after the firmware update is completed.

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